SONY

CAMERA ADAPTOR

CA-705/705P

Digital BETACAM™

MAINTENANCE MANUAL

1st Edition

Serial No. 10001 and Higher (UC)

Serial No. 30001 and Higher (J)

Serial No. 40001 and Higher (CER)

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MANUAL STRUCTURE

Purpose of this manual

This manual is the maintenance manual for Camera Adaptor CA-705/705P.

Contents

The followings are summaries of the each section for understanding the manual.

SECTION1. SERVICE INFORMATION
Describes information about connection and how to replace the main parts.

SECTION2. ALIGNMENT
Describes electrical adjustment.

SECTION3. BLOCK DIAGRAMS
Describes overall block diagram and the block diagrams for every circuit board.

SECTION4. SCHEMATIC DIAGRAMS AND BOARD LAYOUTS
Describes schematic diagrams and the board layouts for every circuit board.

SECTION5. SEMICONDUCTOR PIN ASSIGNMENTS
Describes function diagrams and pin names of semiconductor used in the unit.

SECTION6. SPARE PARTS
Describes parts list, exploded view, packing materials and supplied accessories list used in the unit.

Relative manual

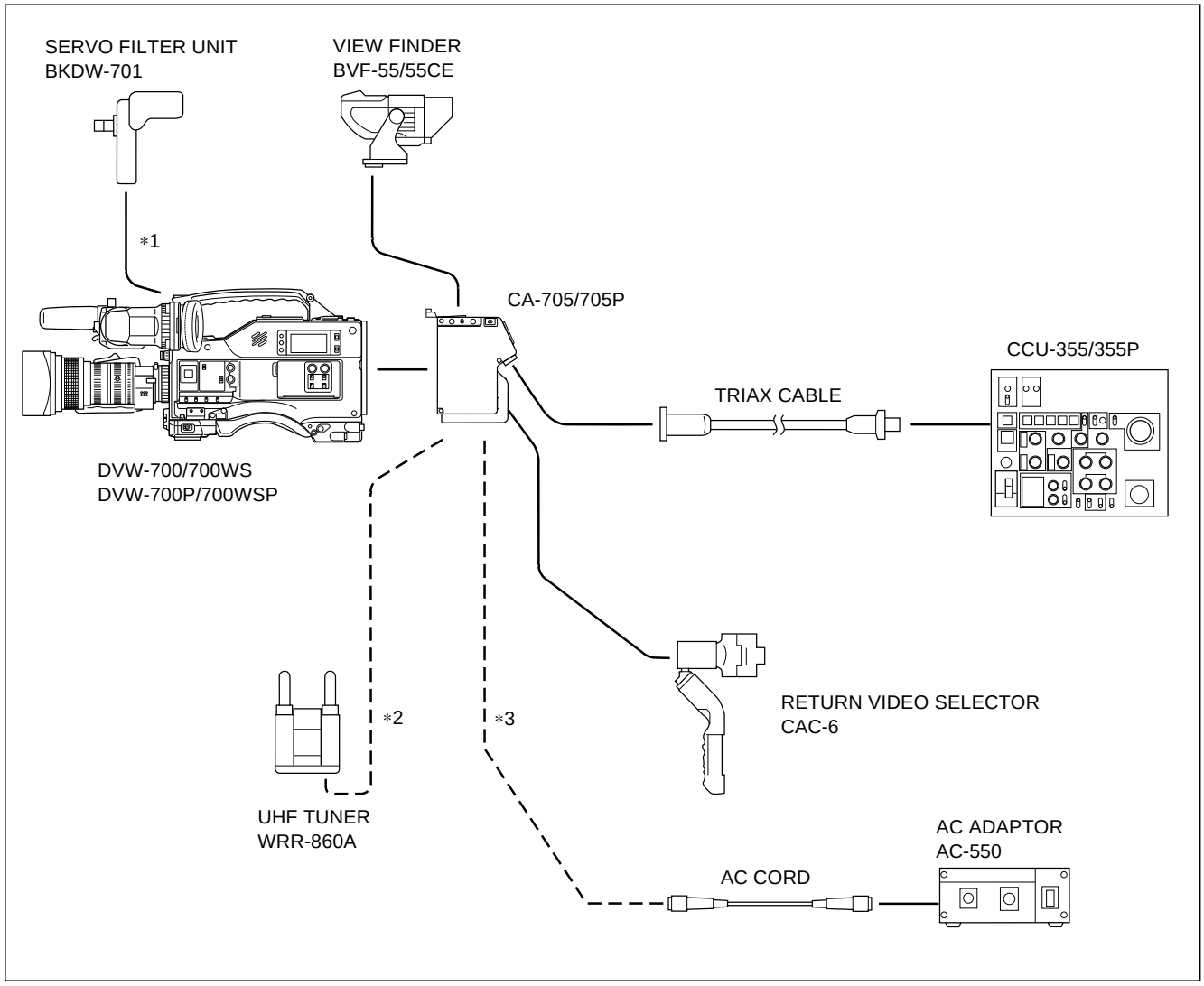
Besides this maintenance manual, the following manual is available for this unit.

- **Operation Manual (Supplied with this unit)**
  This manual is necessary for application and operation of this unit.

Section 1
Service Overview

1-1. System Configuration

1-1-1. Configuration Chart



∗1 The servo filter unit BKDW-701 is capable of operation when connecting the CA-705/705P and CCU-355/355P to a DVW-700/700WS/700P/700WSP. Regarding installation, refer to BKDW-701's installation and maintenance manual.

∗2 Requires a relevant attachment(3-188-663-01) when install the UHF tuner WRR-860A to the outside panel on the CA-705/705P.

∗3 Connect the AC-550 to the CA-705/705P and supplies the power under the electrical adjustment.

1-1-2. Power Supply

Power souces DC +12 V (DC +11.5 V to +17 V)

1. DC voltage is supplied from the camera control unit CCU-355/355P via CCU trminal by using TRIAX cable.

2. DC voltage is supplied from AC adaptor AC-550 via DC IN terminal.

1-2. Connectors

1-2-1. Connector Type

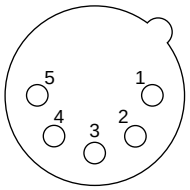
Panel indication	Connector	Matching connector	
RET OUT	BNC	BNC	1-560-069-11
INCOM/PGM	XLR 5P, FEMALE	XLR 5P, MALE	1-508-370-11
DC IN	XLR 4P, with SW, MALE	XLR 4P, FEMALE	1-508-362-00
RET CONT	6P, FEMALE	PLUG, 6P, MALE	1-566-365-11
CCU-355/P	TRIAX	CCT cable (by FISCHER) CCT cable (by KINGS)	

1-2-2. Connector Input/Output Signals

RET OUT

VBS 1.0 V p-p, 75 Ω, Unbalanced

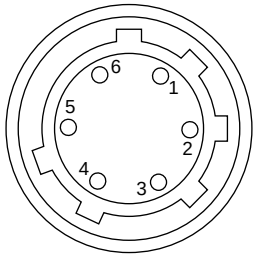
INCOM/PGM



(External View)

Pin No.	Signal	Specification
1	TALK IN (Y)	–20 dBs/–60 dBs
2	TALK IN (X)	
3	GND	
4	INCOM OUT (X)	1.7 V p-p MAX (1 kHz), 300 Ω, Unbalanced
5	PGM OUT (X)	1.7 V p-p MAX (1 kHz), 300 Ω, Unbalanced

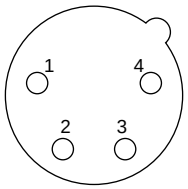
RET CONT



(External View)

Pin No.	Signal	Specification
1	TALK ON IN (RET)	ON : 0 V, Zo ≤10 k Ω
2	AUX 1	NC
3	GND	
4	AUX 2	NC
5	RET 1 ON IN	ON : 0 V, OFF : OPEN
6	RET 2 ON IN	ON : 0 V, OFF : OPEN

DC IN

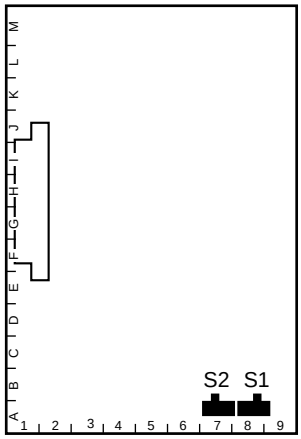


(External View)

Pin No.	Signal	Specification
1	GND	GND for DC (+)
2	(SPARE)	
3	(SPARE)	
4	DC (+) IN	DC 11.5 - 17.0 V

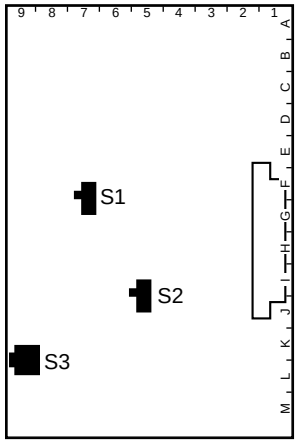
1-3. Setting the Switches on Board

〈 DA-89 Board 〉



Switch	Function	Description	Initial setting
S1 (MIC 1)	Sets whether to output the channel 1 of the microphone.	ON : Outputs the signal OFF : Outputs no signal	ON
S2 (MIC 2)	Sets whether to output the channel 2 of the microphone.	ON : Outputs the signal OFF : Outputs no signal	OFF

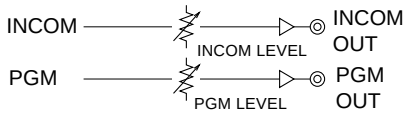
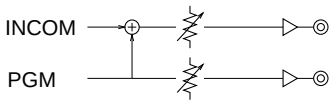
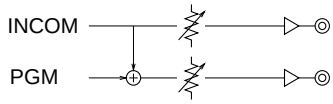
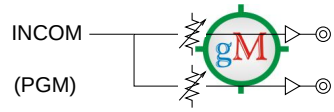
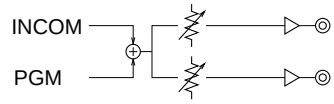
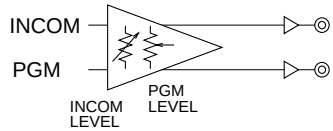
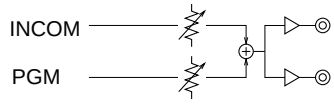
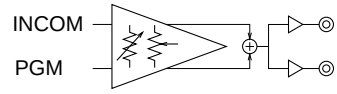
〈 MD-102 Board 〉

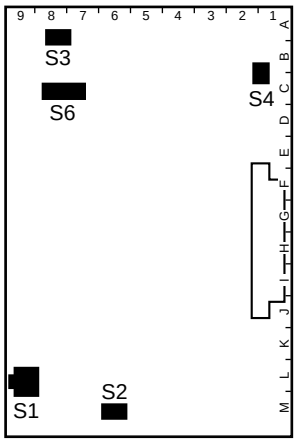


Switch	Function	Description	Initial setting
S1 (R-Y)	Sets whether to add the R-Y signal to the video output signal.	ON:Adds the R-Y signal OFF:Don't add the R-Y signal	ON
S2 (B-Y)	Sets whether to add the B-Y signal to the video output signal.	ON:Adds the B-Y signal OFF:Don't add the B-Y signal	ON
S3 (MD ADJUST)	Sets whether to operate the unit using the power to the DC IN connector for the board adjustment.	ON:For the MD-102 board adjustment OFF:For normal operation	OFF

〈 TR-89 Board 〉

Switch	Function	Description	Initial setting
S1 (INCOM MIC)	Select the type of microphone to the INCOM connector.	C:Carbon microphone D:Dynamic microphone	C
S2	Select the sensibility of microphone to the INCOM connector.	NORMAL:Normal microphone LOW:Highly sensitive microphone	NORMAL

S3-1	-2	-3	-4	S5	Description	Explanation
OFF	OFF	OFF	OFF	OFF		In normal use
OFF	ON	OFF	OFF	OFF		Mix the PGM signal into INCOM signal.
OFF	OFF	ON	OFF	OFF		Mix the INCOM signal into PGM signal.
OFF	OFF	OFF	ON	OFF		Outputs the INCOM signal to the INCOM and PGM out connectors.
OFF	ON	ON	OFF	OFF		Outputs the mix of INCOM and PGM signals to the INCOM and PGM connectors.
ON	OFF	OFF	OFF	OFF		Adjust the level of INCOM and PGM signals using the INCOM LEVEL knob. Adjust the balance between INCOM and PGM signals using the PGM LEVEL knob.
OFF	OFF	OFF	OFF	ON		Outputs the mix of INCOM and PGM signals to the INCOM and PGM connectors.
ON	OFF	OFF	OFF	ON		Outputs the mix of INCOM and PGM signals to the INCOM and PGM connectors.



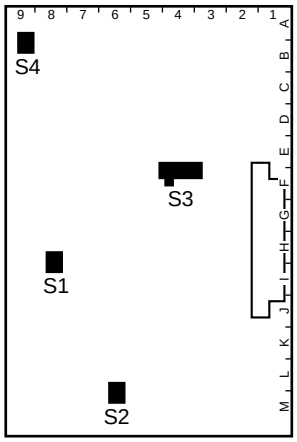
S4-2	S4-3	S4-4	Description
ON	ON	OFF	Adjust the level of the INCOM and PGM using the MIC LEVEL knob on the DVW-700.
OFF	ON	OFF	Sets of the INCOM output signal to ON or OFF using the unit to the RET CONT connecter.
OFF	ON	ON	Sets of the INCOM output signal to ON or OFF using the switch on the DVW-700.∗1
OFF	OFF	OFF	In normal use (Using the switch on the CA-705)

∗1 Select the switch using S2-2 on the IF-443 board in the DVW-700 series (in cassette ejected condition).
ON : VTR START button
OFF : VTR SAVE/STBY switch

〈 TR-89 Board 〉

Switch	Function	Description	Initial setting
S6	Select the output signal from the HEADPHONE OUT connector.	NCOM : Outputs the INCOM signal. MIX : Outputs the mix of INCOM and PGM signals. PGM : Outputs the PGM signal.	MIX

〈 IF-501 Board 〉



Switch	Function	Description	Initial setting
S1-1	Sets of the color television system to NTSC or PAL.	N : NTSC P : PAL	
S1- 2 3 4	Factory use		OFF
S2-1	Factory use		OFF
S2-2	Sets the method of selection to output the RET OUT (BNC) connector.	ON : Outputs the RET2 signal while the RET2 button is pushed. Otherwise, outputs the RET1 signal. OFF : Sets of the output signal to RET1 or RET2 using the RET1 or RET2 button. Outputs the last selection. (Outputs the RET1 signal at the power on.)	ON
S2-3 4	Factory use		OFF
S3	Select the output signal from the RET OUT (BNC) connector.	ON : Outputs the return video signal. OFF : Outputs the time code signal.	ON
S4-1	Select the time code mode (DF or NDF).	DF : Drop frame mode NDF : Non-drop frame mode	NDF
S4-2, 3, 4	Factory use		OFF

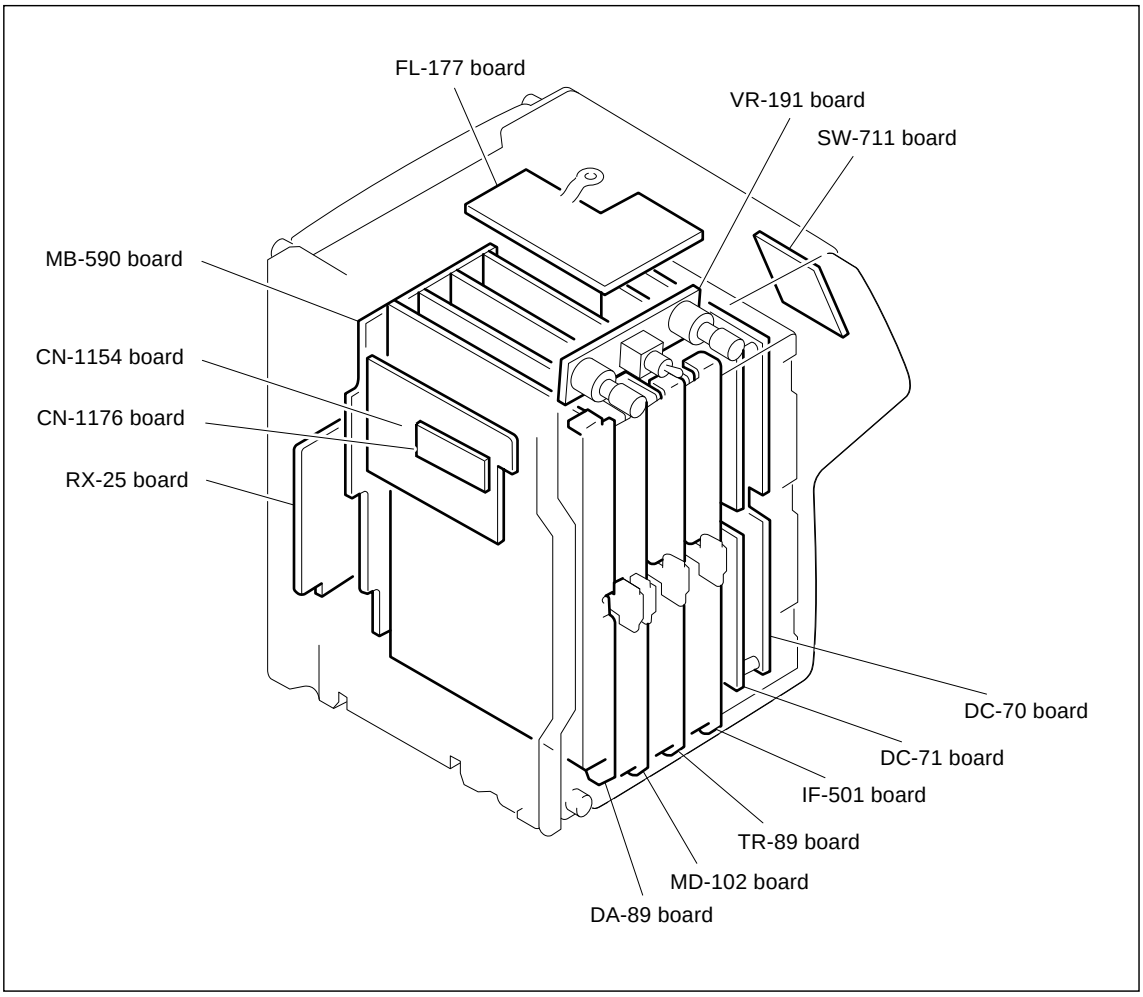
1-4. Notes on System Connection

It is necessary to check the following items in the DVW-700/700WS/700P/700WSP and CCU-355/355P when connect them to the CA-705/705P. Perform the measures shown in the figure when the use conditions are not matched.

Check item	Use condition	Measures	Applicable serial No.
AT board in the CCU-355/355P	Board name is AT-65.	Board replacement (P/N:A-7514-337-A)	
	ROM version is V3.01 or higher.	ROM replacement (P/N:8-759-186-68)	
	IC name of IC19 is M-80C49-884	IC replacement (P/N:8-759-098-08)	
AT-84 board in the DVW-700/700WS/700P/700WSP.	ROM (IC16) version is V2.00 or higher.	ROM replacement (P/N:8-759-275-43)	Serial No. 10001 to 10140 (DVW-700) Serial No. 40001 to 40215 (DVW-700P) Serial No. 10001 to 10065 (DVW-700WS) Serial No. 90001 to 90002 (DVW-700WS) Serial No. 40001 to 40174 (DVW-700WSP)
SY-191 board in the DVW-700/700WS/700P/700WSP.	ROM (IC1) version is V1.04 or higher. ∗1	SY-191 board replacement For NTSC: (P/N:A-8263-159-A) For PAL: (P/N:A-8263-265-A)	Serial No. 10001 to 10140 (DVW-700) Serial No. 40001 to 40215 (DVW-700P) Serial No. 10001 to 10065 (DVW-700WS) Serial No. 90001 to 90002 (DVW-700WS) Serial No. 40001 to 40174 (DVW-700WSP)

∗1 It is necessary to replace the ROMs on the SV-148 board in the DVW-700/700WS/700P/700WSP when replace the ROM on the SY-191 board.
SV-148 board ROM (IC1) version is V1.04 or higher (P/N:8-752-866-49)
ROM (IC2) version is V1.02 or higher (P/N:8-752-866-50)

1-5. Board Layout



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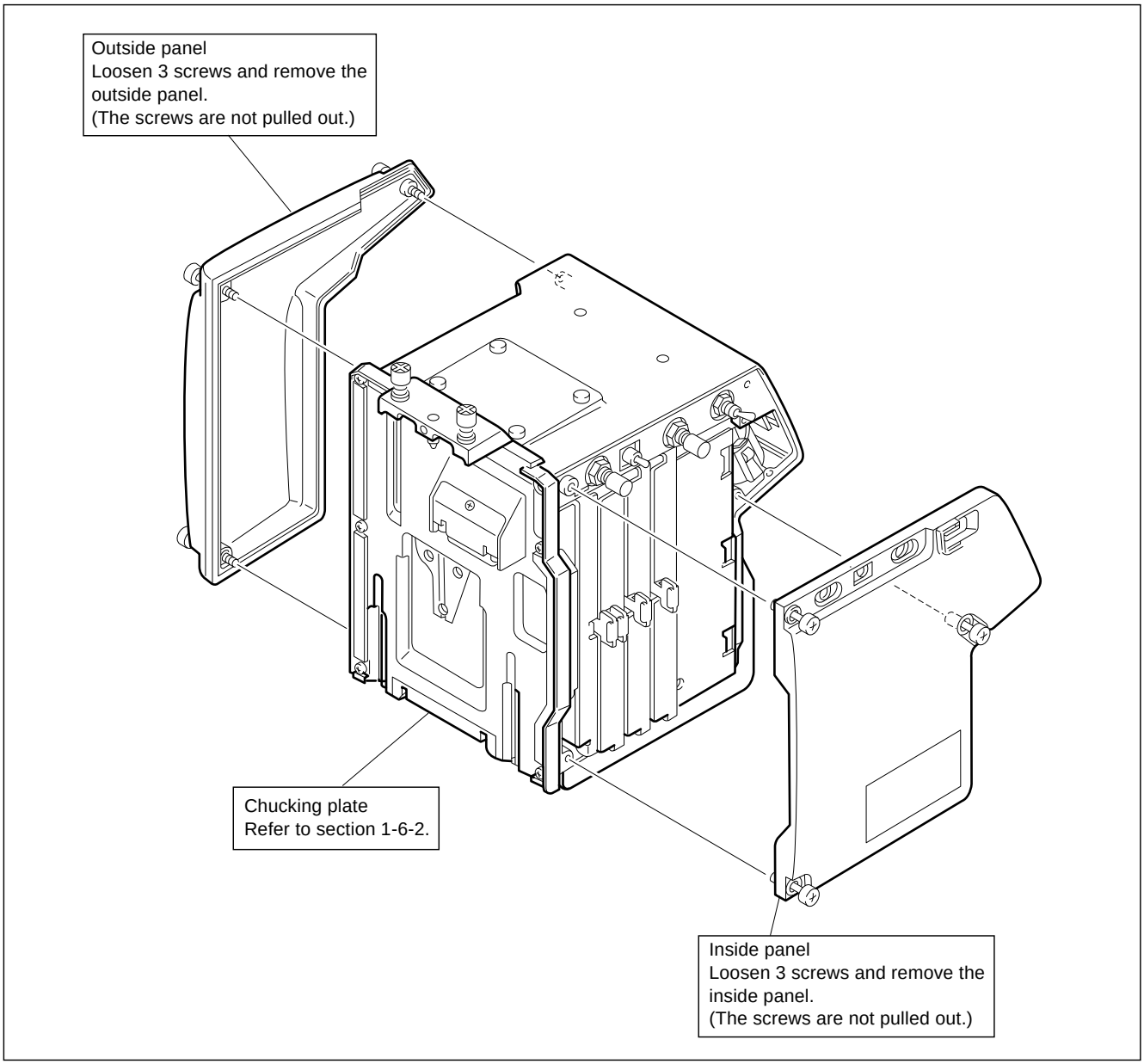
1-6. Replacement of Main Parts

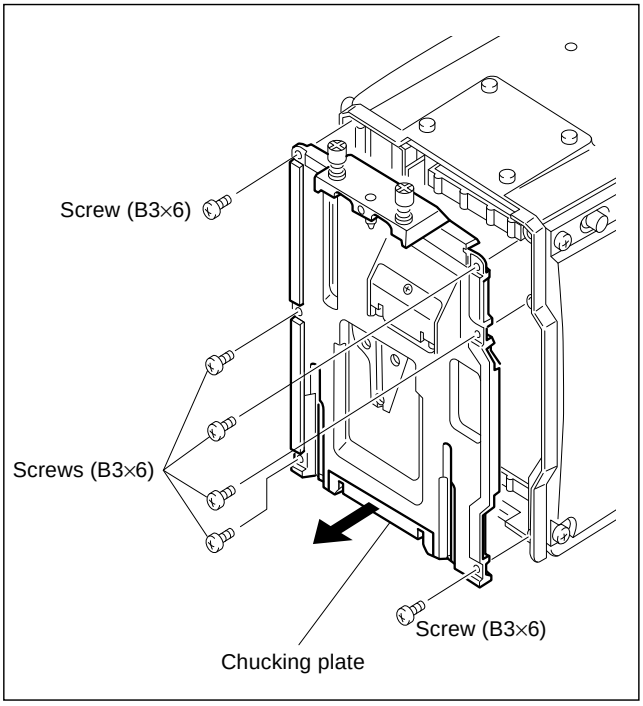
1-6-1. Removal of Cabinet


Outside panel
Loosen 3 screws and remove the outside panel.
(The screws are not pulled out.)
Chucking plate
Refer to section 1-6-2.
Inside panel
Loosen 3 screws and remove the inside panel.
(The screws are not pulled out.)

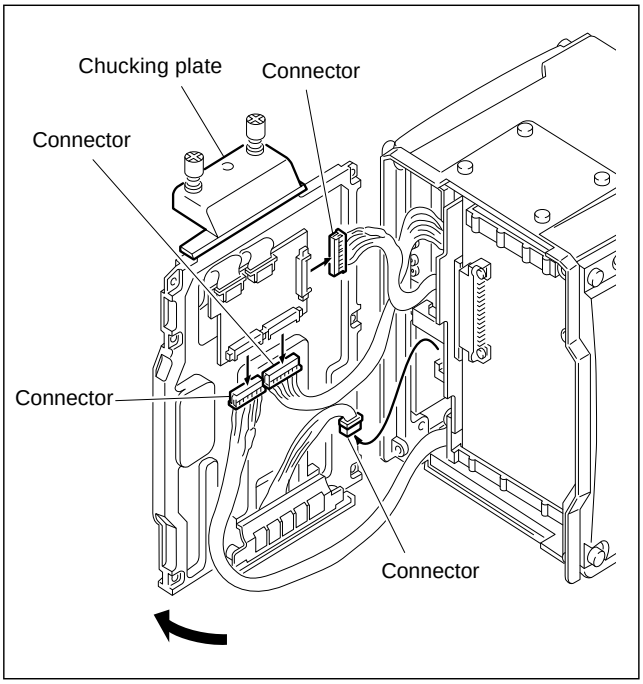
1-6-2. Replacement of 40-pin Connector

1. Removal of the chucking plate

(1) Remove the six screws.



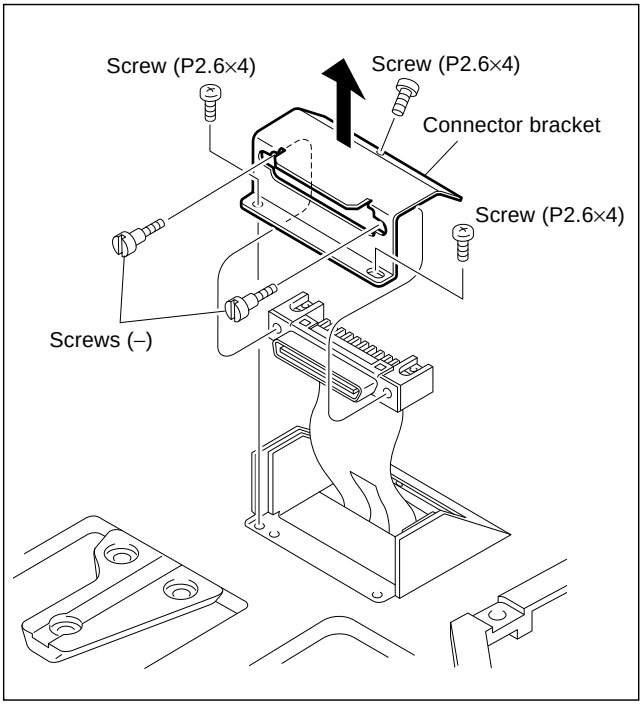
(2) Disconnect the four connectors shown in the figure and remove the chucking plate.



2. Replacement of 40-pin connector

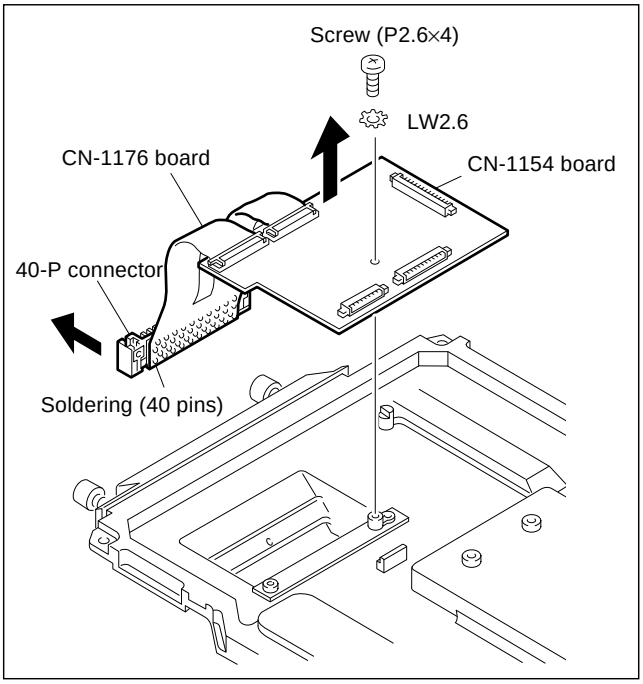
(1) Remove the two screws (–).

(2) Remove the three screws and remove the connector bracket.

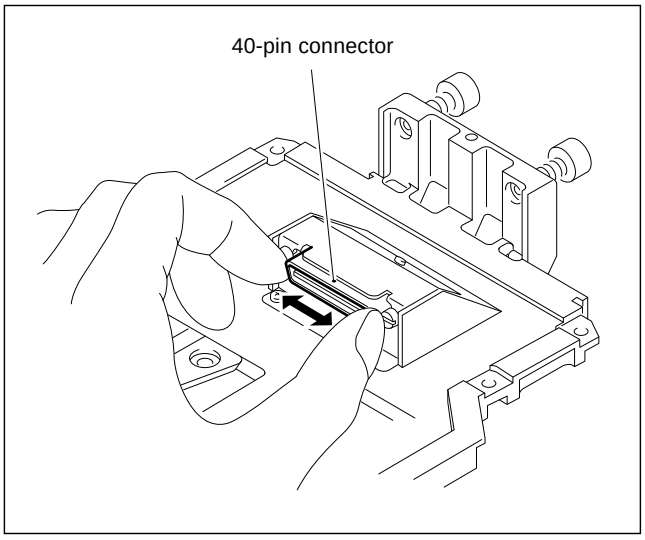


(3) Remove one screw and remove the CN-1176 board.

(4) Desolder the CN-1176 board and remove the 40-pin connector.



(5) Solder the new 40-pin connector on the CN-1176 board.
(6) Attach the 40-pin connector on the chucking plate in the reverse order of removal steps.
(7) Make sure that the 40-pin connector is free by hand.



3. Attach the chacking plate

(1) Connect the four connectors.
(2) Attach the chacking plate with six screws.

1-6-3. Replacement of DC-DC Converter

CAUTION

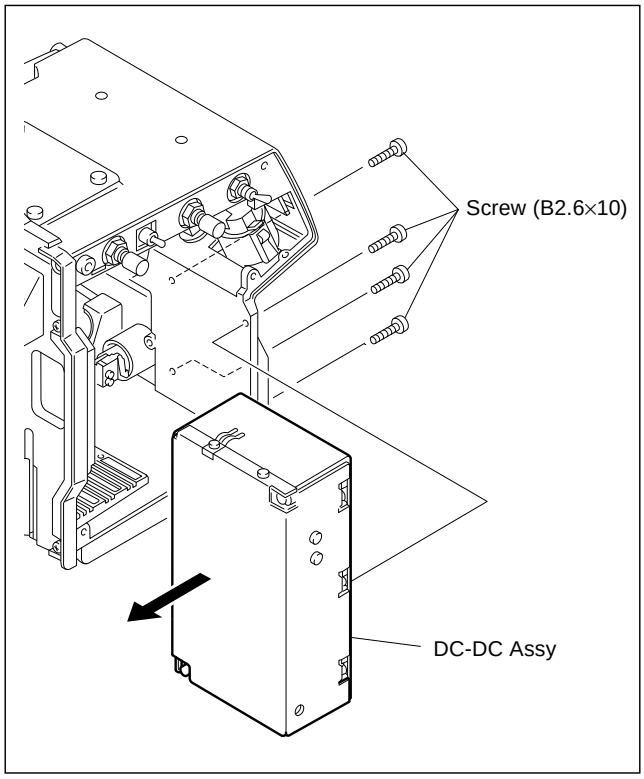
There is a fear of an electric shock if contact inside of the DC-DC assembly. For safety, perform the following operations after 3 minutes or more from turn off the power and remove the TRIAX cable from the unit.

1. Removal of the inside panel

Refer to section 1-6-1 Removal of Cabinet.

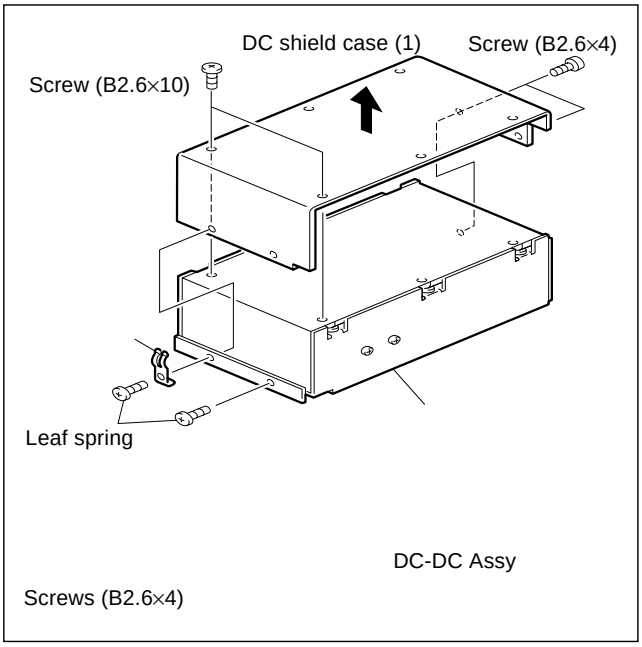
2. Removal of the DC-DC assembly

Remove the four screws and remove the DC-DC assembly from the frame.



3. Removal of the DC shield case (1)

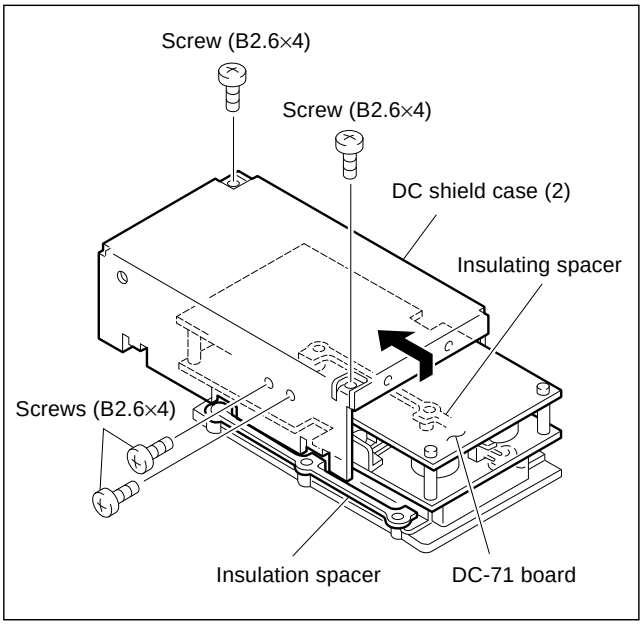
Remove the six screws shown in the figure and remove the DC shield case (1).



4. Removal of the DC shield case (2)

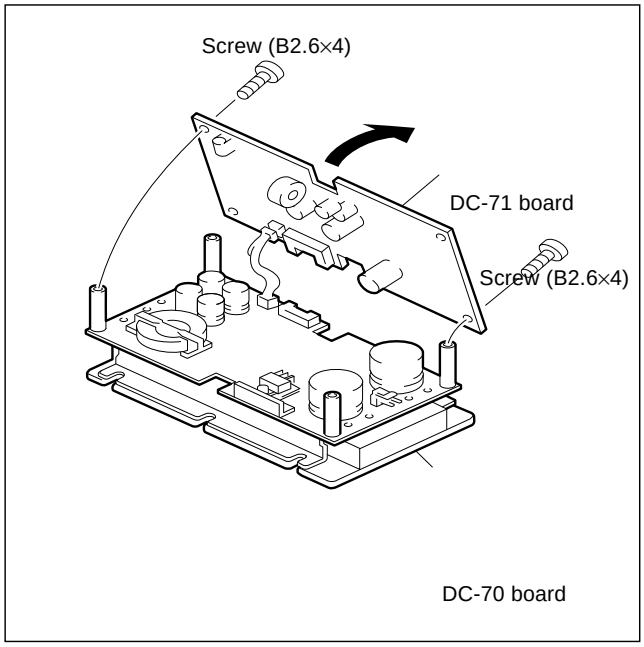
(1) Remove the four screws shown in the figure.

(2) Move the DC shield case (2) in the direction of the arrow and remove it.
Be careful not to lost the insulating spacer (white, two pieces) come off at the same time.



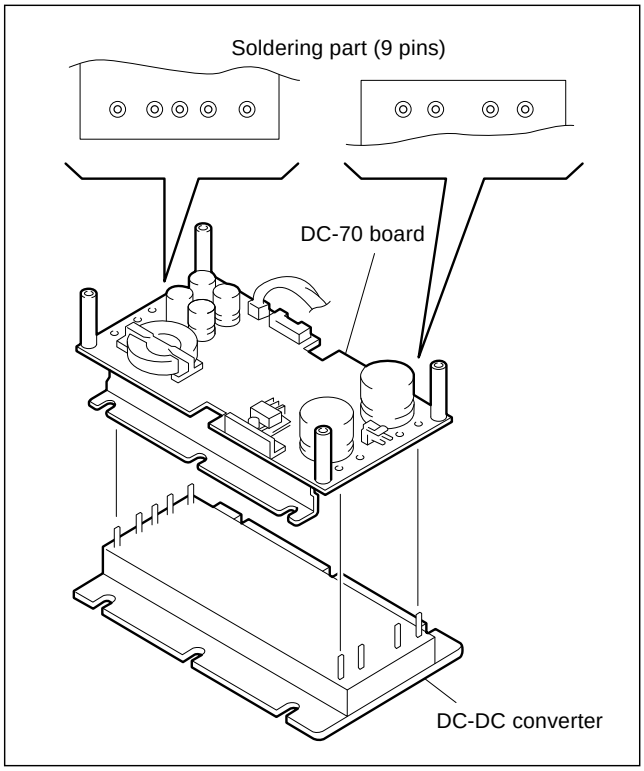
5. Removal of the DC-DC converter

(1) Remove the two screws and remove the DC-71 board.



(2) Desolder the nine pins shown in the figure and remove the DC-DC converter.

(3) Solder the new DC-DC converter to DC-70 board.



6. DC-DC assy installation

Attach the DC-DC assy in the reverse way of removal steps.

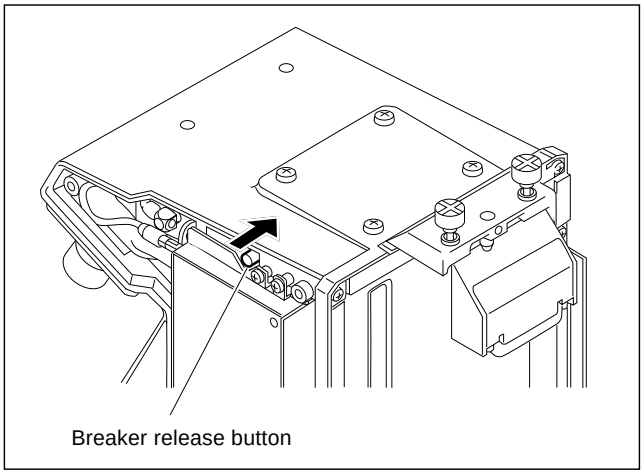
7. Inside panel installation

Install the inside panel with three csrews.

1-7. Notes on Service

1-7-1. Power Circuit Breaker

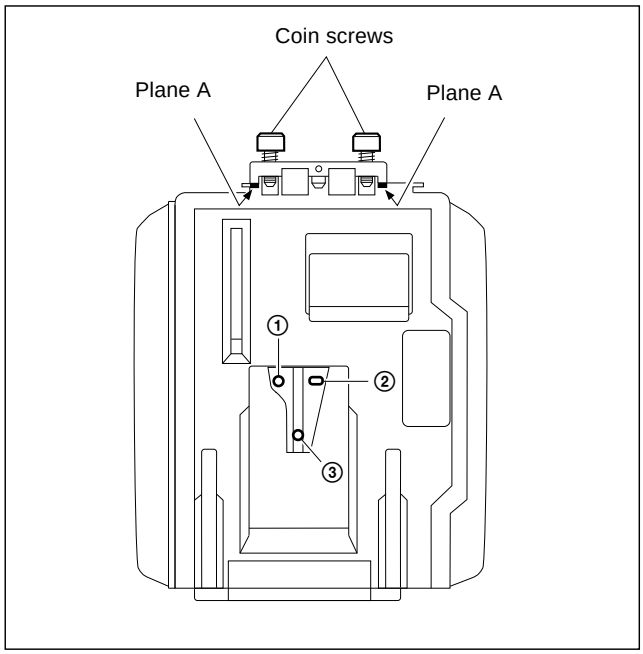
Excessive current in the internal circuitry, whatever the cause, will trip the internal circuit breaker, automatically cutting off the power. After checking that the problem has been corrected, press the button shown in the figure. The power should come on again.



1-7-2. Notes on Replacement of V Shoe

It is necessary to attach the V shoe on the chacking plate with precisely position when will attach the CA-705 on the DVW-700 in absolute contact.

Tighten the three screws sequentially in the figure when attach the V shoe on the chacking plate. Make sure that the plane A (shown in the figure) is in absolute contact with the installation part when attach the CA-705/705P on the DVW-700/700WS/700P/700WSP and tighten the two coin screws.



1-8. Optional Cables

TRIAX cable

KINGS type (for NTSC)	FISCHER type (for PAL)
CCT-50 (50 m)	CCT-K50 (50 m)
CCT-100 (100 m)	CCT-K100 (100 m)
CCT-150 (150 m)	CCT-K150 (150 m)
CCT-300 (300 m)	CCT-K300 (300 m)

They are used for connecting the CCU-355/355P to the CA-705/705P.

1-9. Tool

Extension board EX-454 : J-6258-670-A

Section 2
Alignment

2-1. Preparation

2-1-1. Equipment Required

- **Mesuring instruments**

  digital voltmeter
  frequency counter
  Signal generator
  Oscilloscope (more than 300 MHz)
  Low frequency generator

- **Peripharal equipments**

Digital betacam camcoder	DVW-700/700WS
Camera control unit	CCU-335
AC adaptor	AC-550
TRIAX cable	CCT cable

- **Fixtures**

  Extension board (EX-189)
  Sony part number： A-7513-864-A
  Supplied accessory for CCU-355
  Extension board (EX-454)
  Sony part number： A-6258-670-A
  Optional accessory for CA-705

2-1-2. Notes on Adjustment

- When a board is extracted, turn off the power of the CCU-355 (or the AC-550) and CA-705.
- Before the adjustment, be sure to warm the unit up for about 10minutes.

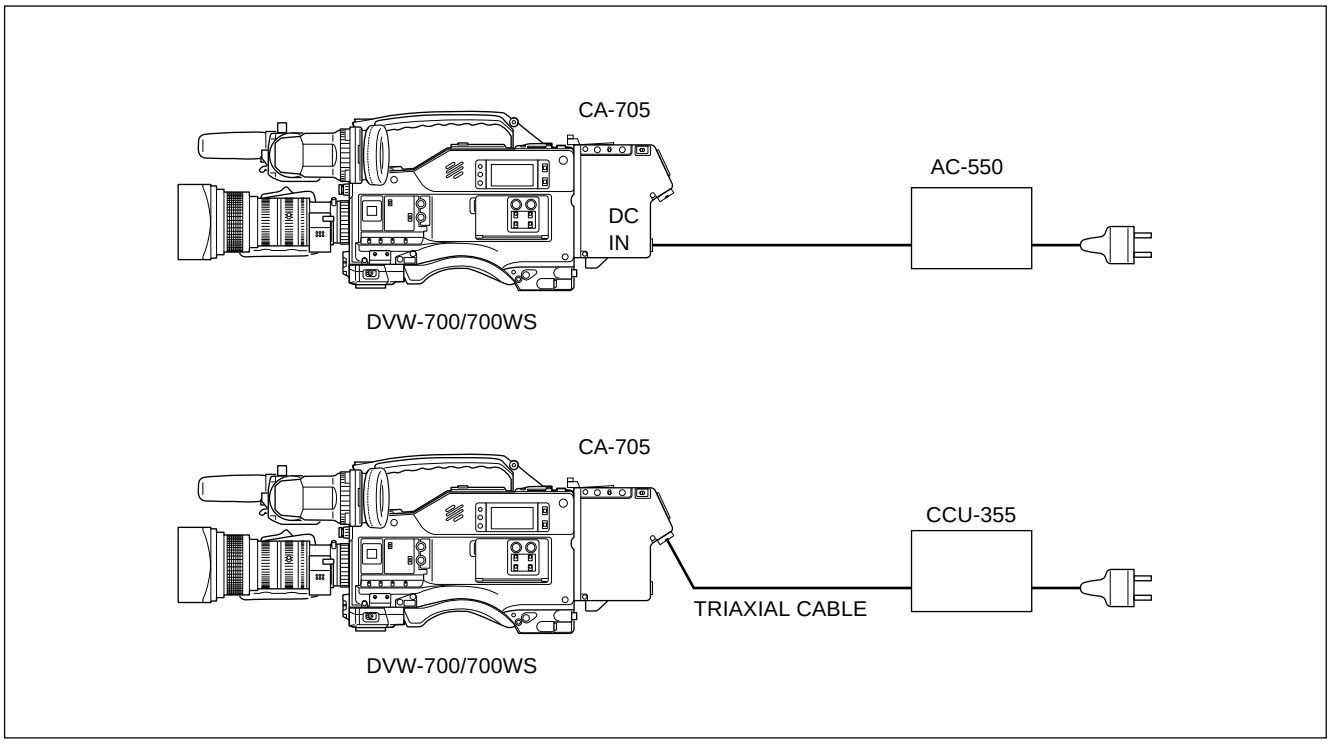
2-1-3. Initial Setting

- **CA-705**

S3/MD-102 board	→ ON
S1/DA-89 board	→ ON
S2/DA-89 board	→ OFF
S1/TR-89 board	→ DYNAMIC
S2/TR-89 board	→ NORMAL

- **DVW-700/700WS**

OUTPUT/DCC switch (inside panel)	→ BARS
AUDIO IN switch (inside panel)	→ REAR
AUDIO SELECT switch (inside panel)	→ AUTO
LINE/MIC switch (rear panel)	→ MIC



2-1-4. Adjustment Items

2-2. Power System Adjustment

2-2-1. +5 V Adjustment

2-3. DA-89 Board Adjustment

2-3-1. Y Gain Adjustment
2-3-2. R-Y Gain Adjustment
2-3-3. B-Y Gain Adjustment
2-3-4. MIC 2 Level Adjustment
2-3-5. MIC 1 Level Adjustment

2-4. MD-102 Board Adjustment

2-4-1. 36 MHz Adjustment
2-4-2. Sample Pulse 1 Adjustment
2-4-3. Sample Pulse 2 Adjustment
2-4-4. Y Sample Pulse Level Adjustment
2-4-5. Y DC Level Adjustment
2-4-6. Y Carrier Balance Adjustment
2-4-7. R-Y SYNC Level Adjustment
2-4-8. R-Y DC Balance Adjustment
2-4-9. R-Y Carrier Balance Adjustment
2-4-10. B-Y Sample Pulse Level Adjustment
2-4-11. B-Y DC Balance Adjustment
2-4-12. B-Y Carrier Balance Adjustment

2-5. TR-89 Board Adjustment

2-5-1. Carrier Frequency Adjustment
2-5-2. RF Level Adjustment
2-5-3. PGM/INCOM Demodulation Circuit Adjustment
2-5-4. Data Demoduration Circuit Adjustment
2-5-5. H CONT Level Adjustment
2-5-6. MIC Level Adjustment
2-5-7. DYNAMIC MIC Gain Adjustment
2-5-8. Side Tone Level Adjustment
2-5-9. CHU INCOM Level Adjustment
2-5-10. CCU INCOM Demoduration Level Adjustment
2-5-11. EARPHONE Level Adjustment
2-5-12. PGM Demoduration Level Adjustment
2-5-13. INCOM LEVEL Volume LOW Level Adjustment
2-5-14. INCOM LEVEL Volume HIGH Level Adjustment
2-5-15. PGM LEVEL Volume LOW Level Adjustment
2-5-16. PGM LEVEL Volume HIGH Level Adjustment

2-6. RX-25 Board Adjustment

2-6-1. PLL Free Run Frequency Adjustment
2-6-2. Return Video Level Adjustment

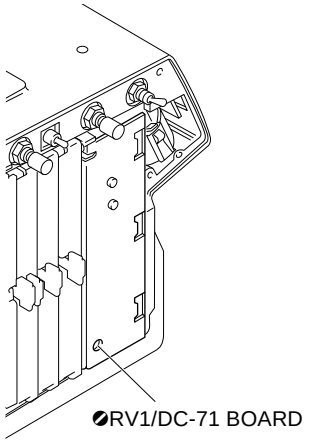
2-2. Power System Adjustment

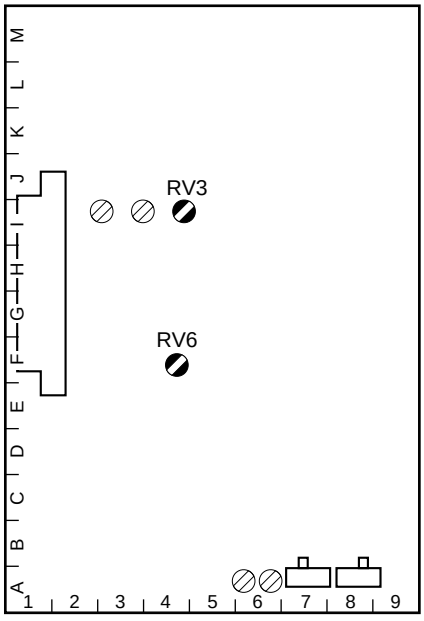
2-2-1. +5 V Adjustment

Preparation:

1. Turn the POWER switch to OFF on the CCU-355 and disconnect the triaxial cable.
2. S3 (MD ADJUST) /MD-102 → ON
3. Connect the DC IN connector on the CA-705 to the AC-550/550CE using a cable. Set the POWER switch to ON on the CA-705.

To be extended: DA-89 board
Equipment: Digital voltmeter
Test point: TP46/extension board
GND: TP50/extension board
Adjustment point: ⊘RV1/DC-71 board
Specification: 5.00 ±0.01 V





DA-89 BOARD (COMPONENT SIDE)

2-3. DA-89 Board Adjustment

Preparation:

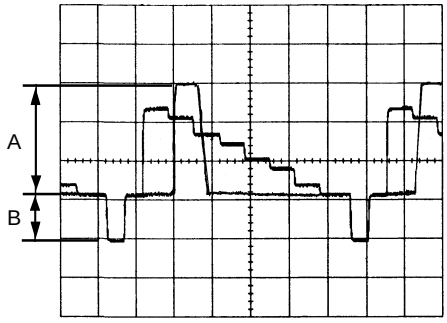
1. Turn the POWER switch to OFF on the CCU-355 and disconnect the triaxial cable.
2. S3 (MD ADJUST)/MD-102 → ON
3. Connect the DC IN connector on the CA-705 to the AC-550/550CE using a cable. Set the POWER switch to ON on the CA-705.
4. OUTPUT/DCC switch
   (DVW-700 inside panel) → BARS

2-3-1. Y Gain Adjustment

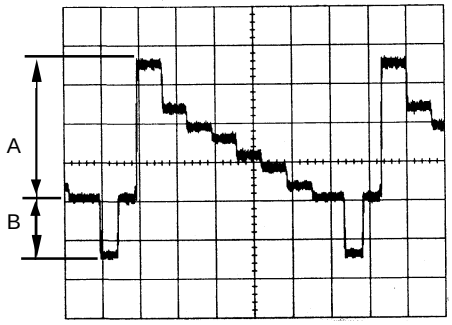
To be extended: DA-89 board
Equipment: Oscilloscope
Test point: TP37/extension board

Adjustment procedure

1.Adjustment point: ⊘RV3 (Y GAIN)/DA-89 board
Specification: A = 700 ±10 mV
2.Adjustment point: ⊘RV6 (Y SYNC)/DA-89 board
Specification: B = 300 ±10 mV



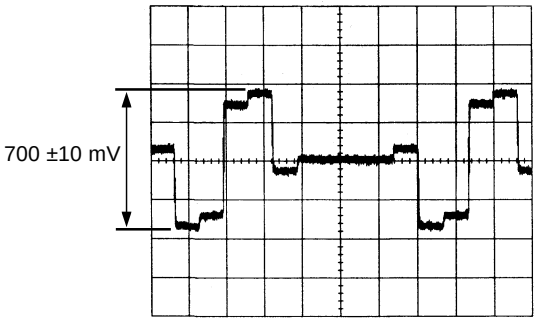
[NTSC]



[PAL]

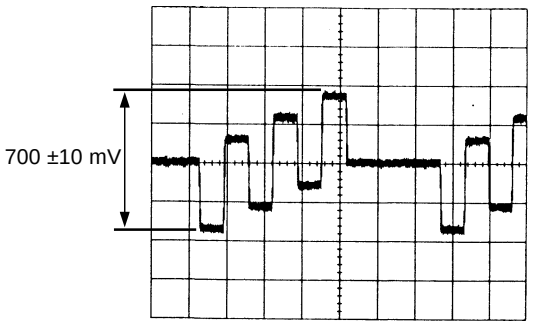
2-3-2. R-Y Gain Adjustment

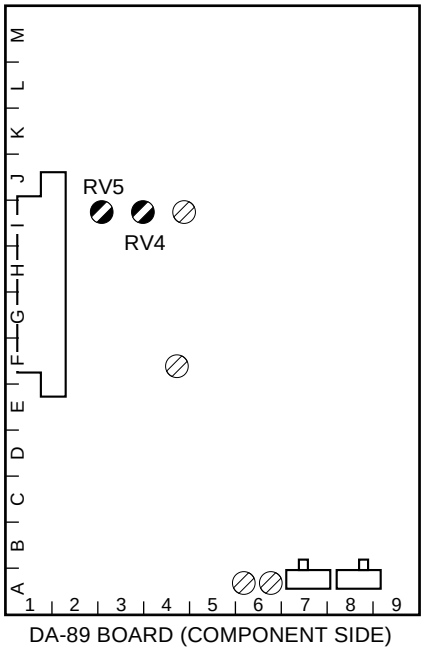
To be extended: DA-89 board
Equipment: Oscilloscope
Test point: TP39/extension board
Adjustment point: ⊘RV4 (R-Y GAIN)/DA-89 board
Specification: 700 ±10 mV



2-3-3. B-Y Gain Adjustment

To be extended: DA-89 board
Equipment: Oscilloscope
Test point: TP41/extension board
Adjustment point: ⊘RV5 (B-Y GAIN)/DA-89 board
Specification: 700 ±10 mV





DA-89 BOARD (COMPONENT SIDE)

2-3-4. MIC 2 Level Adjustment

Preparation:

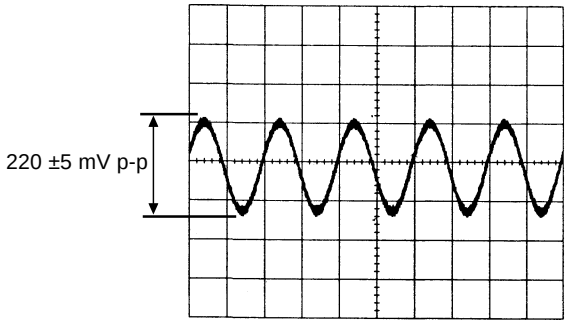
Sets to record the –20 dBs in 1-kHz test signal of an internal signal generator using diagnostic mode of the DVW-700.(Refer to section 3-2. DIAGNOSTIC MODE of the DVW-700/700WS MAINTENANCE MANUAL Part 1)

VTR MENU-4	
VTR MODE SELECT-2	
1. AUDIO OUT (F/R)	EE
2. AUDIO OUT (CH)	CH1/2
3. AU-REC CH3/CH4	ON
4. AU-REC 1 kHz	–20 dB
5. AU-EMPHASIS	ON

VF Screen

S1/DA-89 board → OFF
S2/DA-89 board → ON

To be extended: DA-89 board
Equipment: Oscilloscope
Test point: TP48/extension board
Adjustment point: ⊘RV2 (MIC 2 GAIN)/DA-89 board
Specification: 220 ±5 mV p-p



2-3-5. MIC 1 Level Adjustment

Preparation:

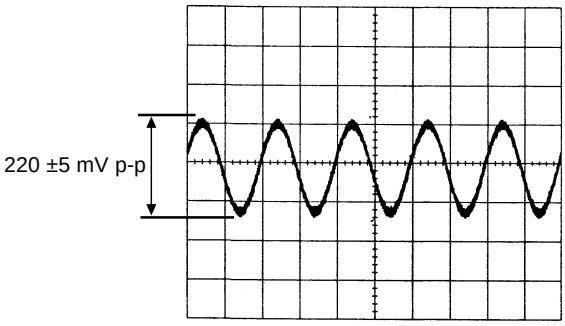
Sets to record the –20 dBs in 1-kHz test signal of an internal signal generator using diagnostic mode of the DVW-700.(Refer to section 3-2. DIAGNOSTIC MODE of the DVW-700/700WS MAINTENANCE MANUAL Part 1)

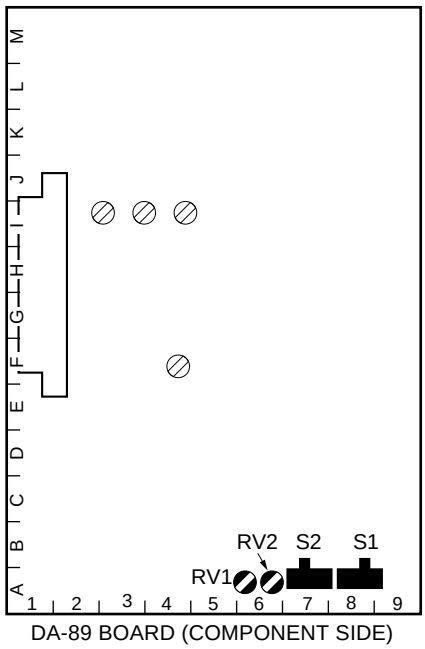
S1/DA-89 board → ON
S2/DA-89 board → OFF

To be extended: DA-89 board
Equipment: Oscilloscope
Test point: TP48/extension board
Adjustment point: ⊘RV1 (MIC 1 GAIN)/DA-89 board
Specification: 220 ±5 mV p-p

Setting after adjustment

- Reset the DIAGNOSTIC mode of the DVW-700 to the former setting.





DA-89 BOARD (COMPONENT SIDE)

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2-4. MD-102 Board Adjustment

Preparation:

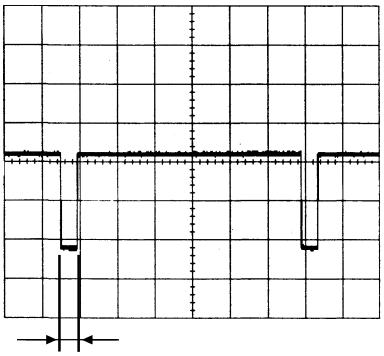
1. Turn the POWER switch to OFF on the CCU-355 and disconnect the triaxial cable.
2. S3 (MD ADJUST) /MD-102 → ON
3. Connect the DC IN connector on the CA-705 to the AC-550/550CE using a cable. Set the POWER switch to ON on the CA-705.
4. OUTPUT/DCC switch (DVW-700 inside panel) → BARS

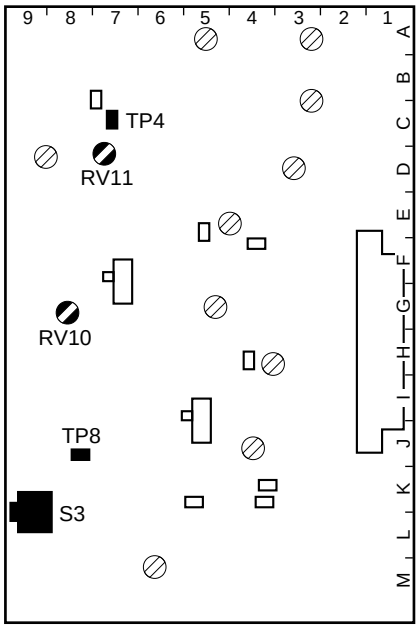
2-4-1. 36 MHz Adjustment

To be extended: MD-102 board
Equipment: Frequency counter
Test point: TP8/MD-102 board
Adjustment point: ◓RV10 (36 MHz ADJ) /MD-102 board
Specification: 36.000000 MHz ±50 Hz

2-4-2. Sample Pulse 1 Adjustment

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP4/MD-102 board
Adjustment point: ◓RV11 (H PHASE)/MD-102 board
Specification: 4.0 ±0.2 µs

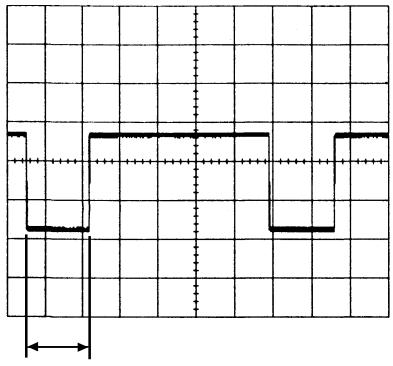




MD-102 BOARD (COMPONENT SIDE)

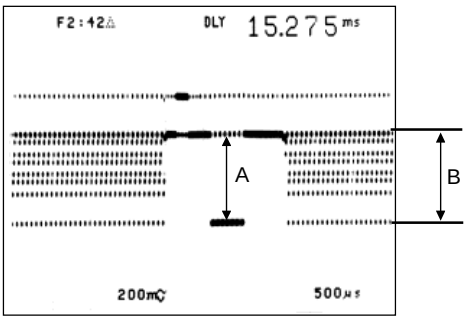
2-4-3. Sample Pulse 2 Adjustment

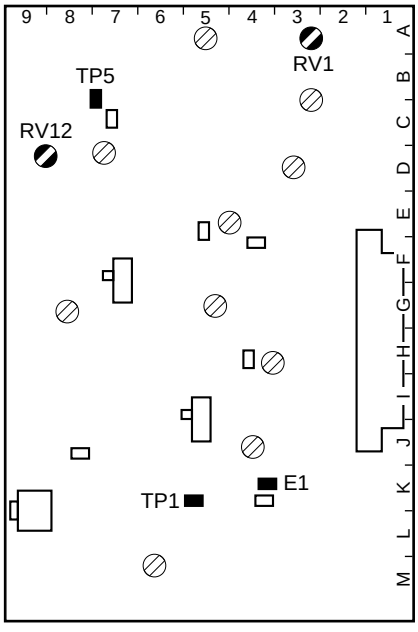
To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP5/MD-102 board
Adjustment point: ⊘RV12 (H WIDTH)/MD-102 board
Specification: 17.0 ±0.2 µs



2-4-4. Y Sample Pulse Level Adjustment

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP1/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV1 (SAMPLE LEVELY)/ MD-102 board
Specification: A-B = 0 ±2 mV

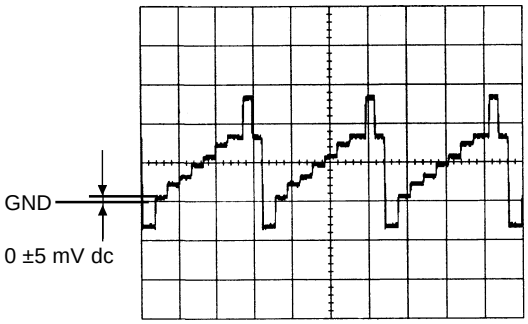




MD-102 BOARD (COMPONENT SIDE)

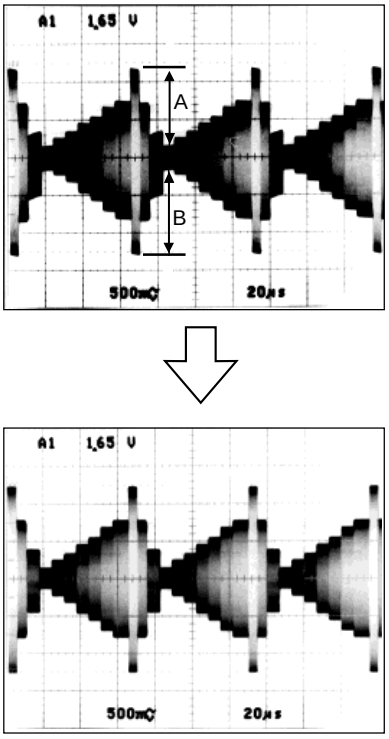
2-4-5. Y DC Level Adjustment

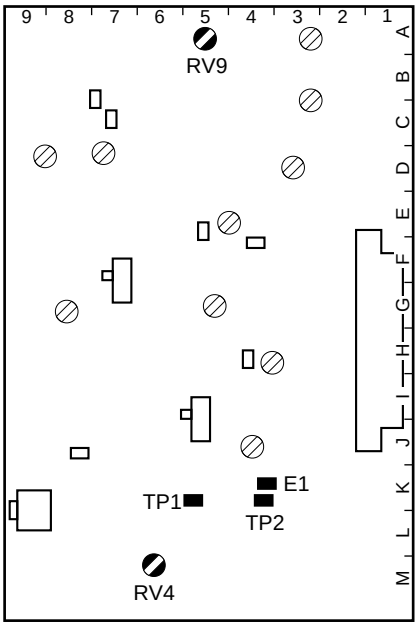
To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP1/MD-102 board
GND: E1/MD-102 board
Adjustment point: ◓RV9 (Y DC SET)/MD-102 board
Specification: 0 ±5 mV dc



2-4-6. Y Carrier Balance Adjustment

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP2/MD-102 board
GND: E1/MD-102 board
Adjustment point: ◓RV4 (Y CARRIER BALANCE) / MD-102 board
Specification: A = B





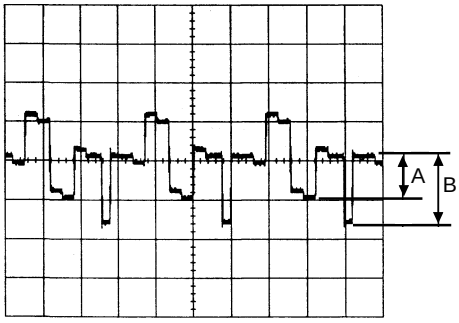
MD-102 BOARD (COMPONENT SIDE)

2-4-7. R-Y SYNC Level Adjustment

Preparation:

S1/MD-102 → ON
S2/MD-102 → OFF

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP3/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV2 (SYNC LEVEL) /MD-102 board
Specification: B/A×100 = 160 ±1 %

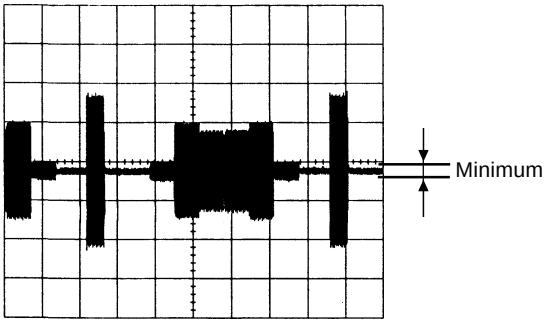


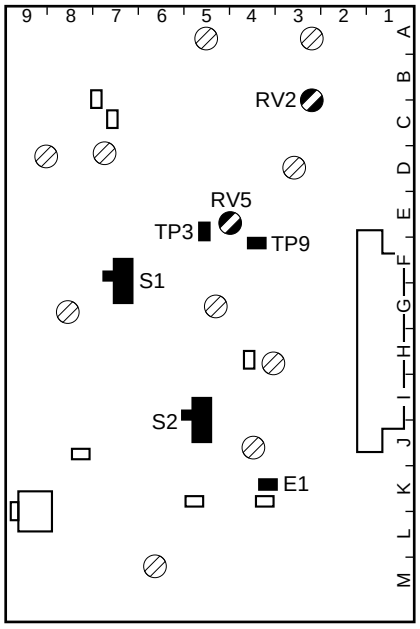
2-4-8. R-Y DC Balance Adjustment

Preparation:

S1/MD-102 → ON
S2/MD-102 → OFF

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP9/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV5 (R-Y DC BAL) /MD-102 board
Specification: Minimum





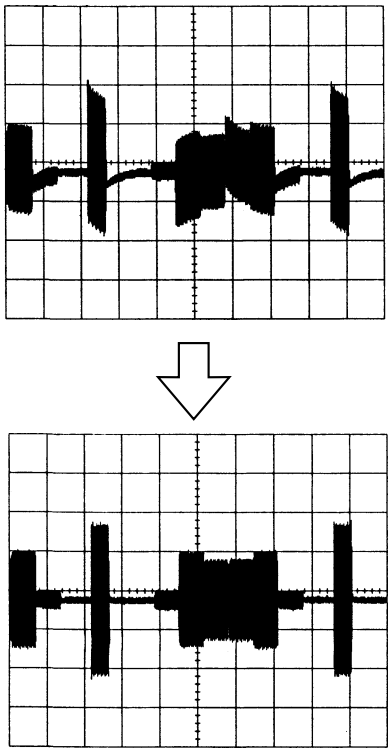
MD-102 BOARD (COMPONENT SIDE)

2-4-9. R-Y Carrier Balance Adjustment

Preparation:

S1/MD-102 → ON
S2/MD-102 → OFF

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP9/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV6 (R-Y CARRIER BAL) /MD-102 board
Specification: Waveform should be flat

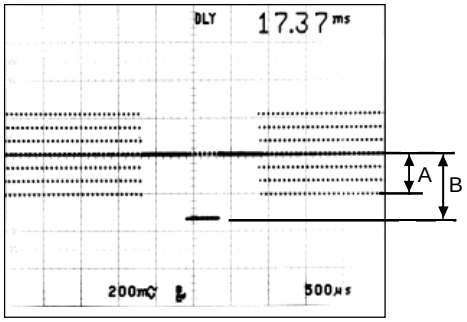


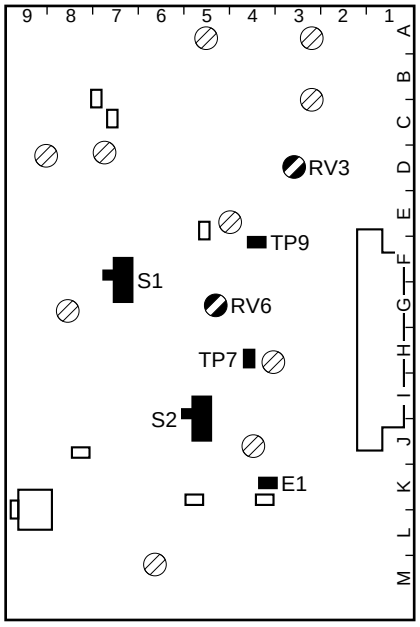
2-4-10. B-Y Sample Pulse Level Adjustment

Preparation:

S1/MD-102 → OFF
S2/MD-102 → ON

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP7/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV3 (SAMPLE LEVEL B-Y) / MD-102 board
Specification: B/A×100 = 160 ±1 %





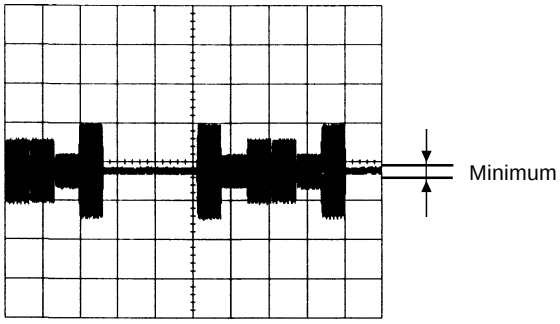
MD-102 BOARD (COMPONENT SIDE)

2-4-11. B-Y DC Balance Adjustment

Preparation:

S1/MD-102 → OFF
S2/MD-102 → ON

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP9/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV7 (B-Y DC BAL) / MD-102 board
Specification: Minimum



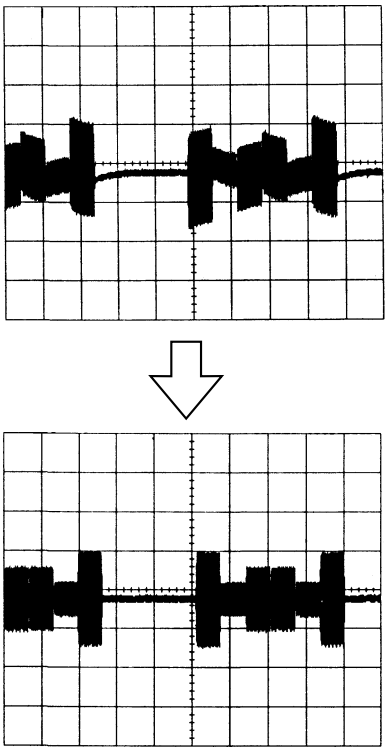
2-4-12. B-Y Carrier Balance Adjustment

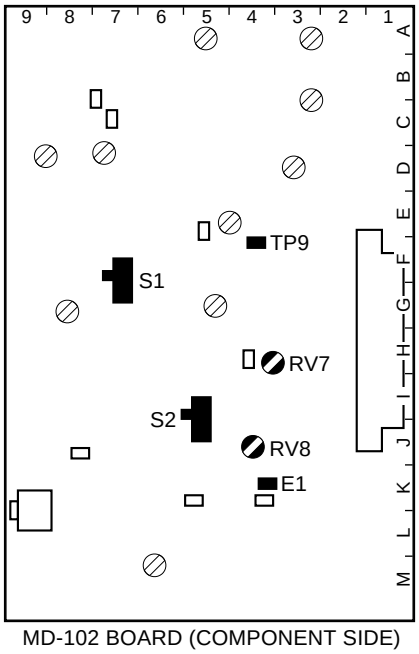
Preparation:

S1/MD-102 → OFF
S2/MD-102 → ON

To be extended: MD-102 board
Equipment: Oscilloscope
Test point: TP9/MD-102 board
GND: E1/MD-102 board
Adjustment point: ⊘RV8 (B-Y CARRIER BALANCE)/MD-102 board
Specification: Waveform should be flat
Setting after adjustment

S1/MD-102 → ON
S2/MD-102 → ON





MD-102 BOARD (COMPONENT SIDE)

2-5. TR-89 Board Adjustment

Preparation:

1. Turn the POWER switch to OFF on the CA-705 and disconnect the cable from the DC IN connector.
2. S3 (MD ADJUST)/MD-102 → OFF
3. Connect the CA-705 to the AC-550/550CE using a triaxial cable. Set the POWER switches to ON on the CA-705 and CCU-355.

2-5-1. Carrier Frequency Adjustment

Preparation:

Adjust this item after one minute or more from the power to ON.

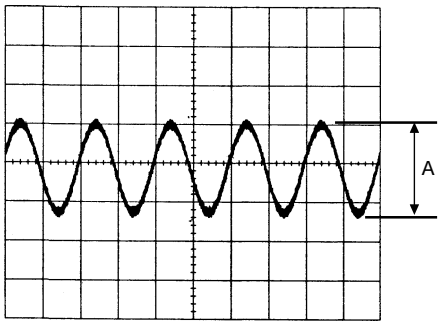
To be extended: TR-89 board
Equipment: Frequency counter

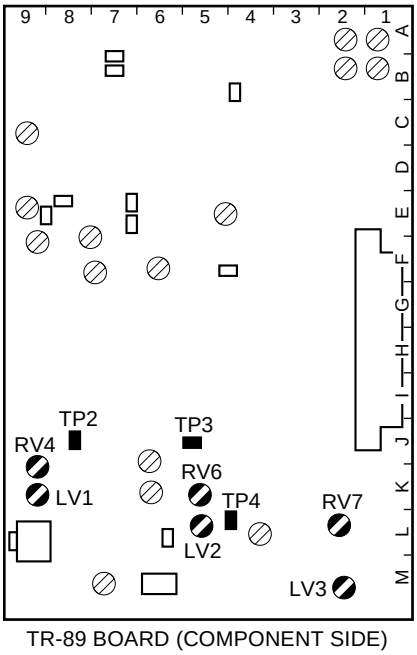
Test point	Adjustment point	Specification
TP4	⊘LV3	6.194 ±0.003 MHz
TP3	⊘LV2	6.800 ±0.003 MHz
TP2	⊘LV1	5.700 ±0.003 MHz

2-5-2. RF Level Adjustment

To be extended: TR-89 board
Equipment: Oscilloscope

Test point	Adjustment point	Specification
TP4	⊘RV7 (DATA RF LEV)	A = 250 ±10 mV
TP3	⊘RV6 (MIC RF LEV)	A = 250 ±10 mV
TP2	⊘RV4 (INCOM RF LEV)	A = 310 ±10 mV





TR-89 BOARD (COMPONENT SIDE)

2-5-3. PGM/INCOM Demodulation Circuit Adjustment

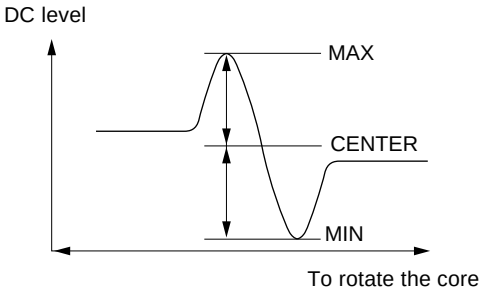
Note:

carefully adjust an adjusting core such as LV6.

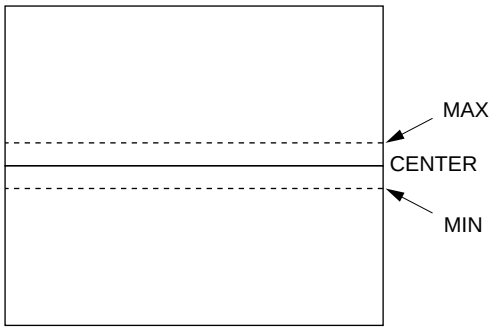
To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP6,TP8/TR-89 board
Adjustment point: ⊘LV6 (INCOM DC) ,
⊘LV7 (PGM DC)/TR-89 board

Adjustment procedure

1. When rotating ⊘LV6/TR-89 board clockwise or counterclockwise, the DC level will be changed as follows.



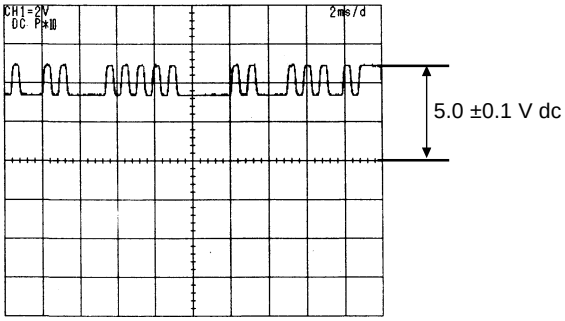
2. Adjust ⊘LV6/TR-89 board so that the DC level at TP6/ TR-89 board is set to the center of maximum and minimum value.
3. Adjust ⊘LV7/TR-89 board so that the DC level at TP8/ TR-89 board is set to the center of maximum and minimum value.

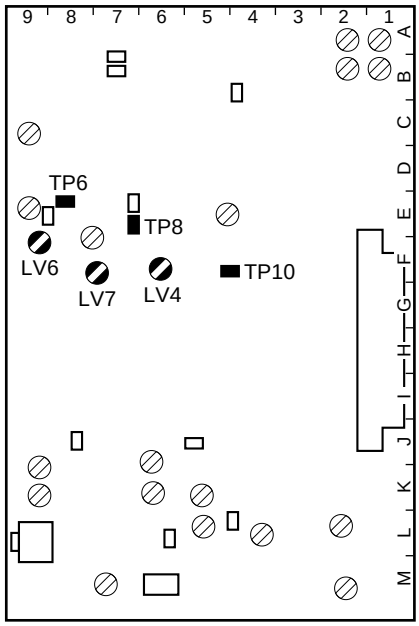


Oscilloscope screen

2-5-4. Data Demoduration Circuit Adjustment

To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP10/TR-89 board
Adjustment point: ⊘LV4 (DATA DC)/TR-89 board
Specification: 5.0 ±0.1 V dc





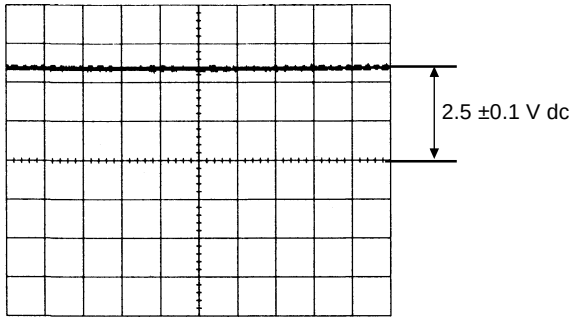
TR-89 BOARD (COMPONENT SIDE)

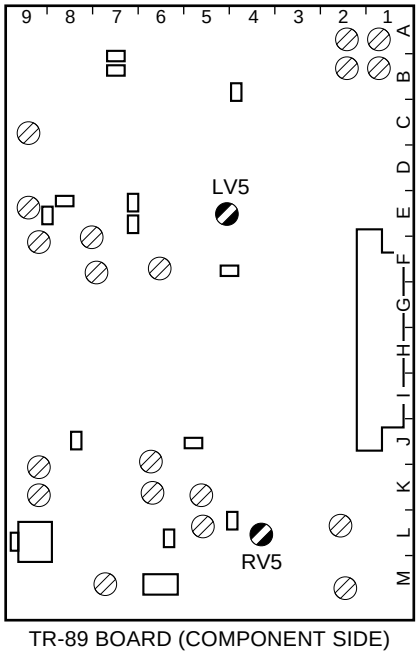
2-5-5. H CONT Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the camera.

To be extended: TR-89 board
SG-131 board (CCU-355)
Equipment: Oscilloscope
Test point: TP13/SG-131 board
Adjustment point: ⊘LV5 (H CONT DC)/TR-89 board
Specification: 2.5 ±0.1 V dc





TR-89 BOARD (COMPONENT SIDE)

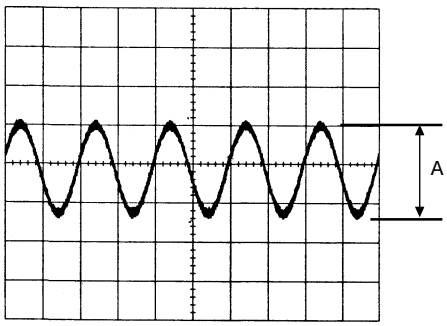
2-5-6. MIC Level Adjustment

Preparation

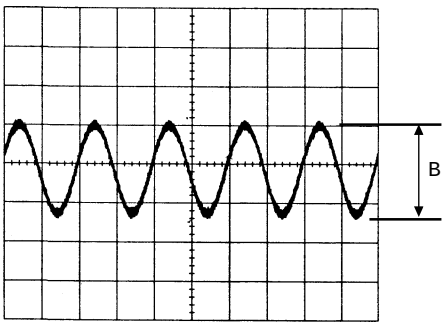
- Connect a completely adjusted CCU-355 to the camera.
- Supply the 1 kHz, –60 dBs sine wave from the low frequency oscillator to the AUDIO IN CH-1 on the DVW-700 rear panel.
- LINE/MIC switch
  (DVW-700 rear panel) → MIC
- AUDIO IN switch
  (DVW-700 inside panel) → REAR
- AUDIO SELECT switch
  (DVW-700 inside panel) → AUTO

To be extended: TR-46 board (CCU-355)
TR-89 board (CA-705)
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP33/extension board (TR-46 board)
Adjustment point: ⊘RV5 (MIC DEV)/TR-89 board
Specification: A/B = 2.0 ±0.1

A:TP16/extension board (TR-89 board)



B:TP33/extension board (TR-46 board)

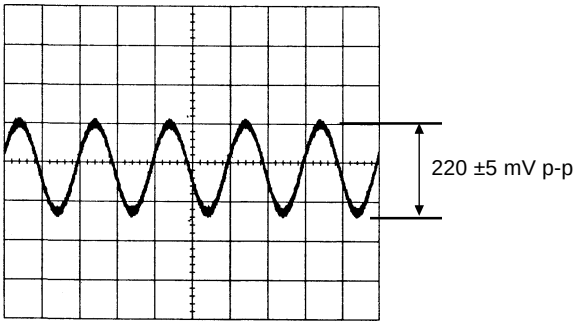


2-5-7. DYNAMIC MIC Gain Adjustment

Preparation

- S1/TR-89 board → DYNAMIC
- S2/TR-89 board → NORMAL
- Supply the 1 kHz, –60 dBs sine wave from the low frequency oscillator to INCOM/PGM connector on the CA-705.

To be extended: TR-89 board
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP1/TR-89 board
Adjustment point: ⊘RV1 (DYNAMIC LEVEL) / TR-89 board
Specification: 220 ±5 mV p-p

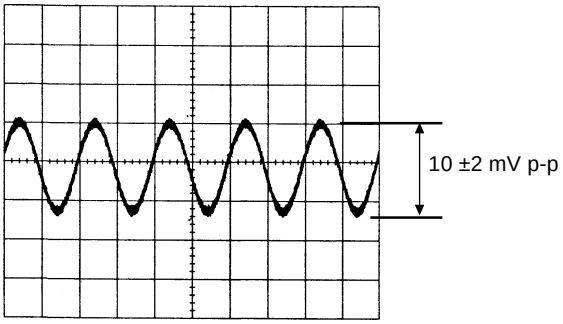


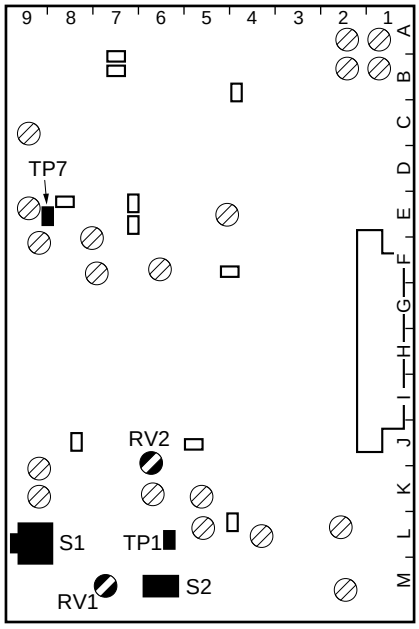
2-5-8. Side Tone Level Adjustment

Preparation

- S1/TR-89 board → DYNAMIC
- S2/TR-89 board → NORMAL
- Supply the 1 kHz, –60 dBs sine wave from the low frequency oscillator to INCOM/PGM connector on the CA-705.

To be extended: TR-89 board
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP7/TR-89 board
Adjustment point: ⊘RV2 (SIDE TONE)/TR-89 board
Specification: 10 ±2 mV p-p





TR-89 BOARD (COMPONENT SIDE)

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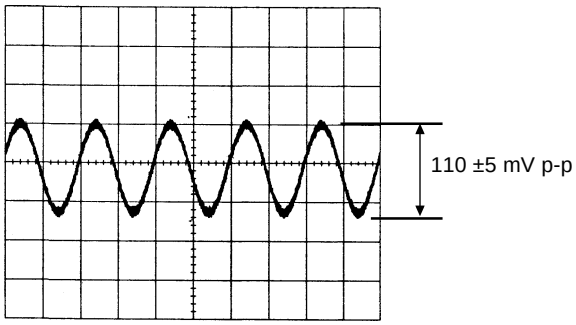
2-5-9. CHU INCOM Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- S1/TR-89 board → DYNAMIC
- S2/TR-89 board → NORMAL
- Supply the 1 kHz, –60 dBs sine wave from the low frequency oscillator to INCOM/PGM connector on the CA-705.

To be extended: TR-89 board
TR-46 board (CCU-355)
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP37/extension board
(TR-46 board)
Adjustment point: ◓RV3 (INCOM DEV) /
TR-89 board
Specification: 110 ±5 mV p-p

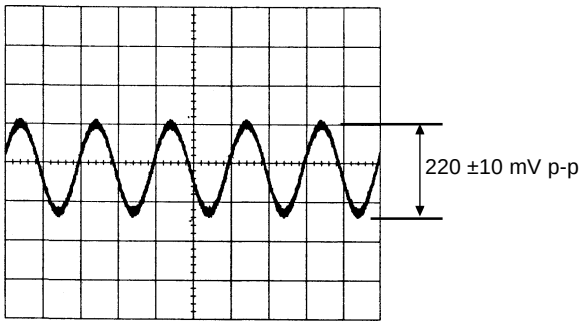


2-5-10. CCU INCOM Demoduration Level Adjustment

Preparation

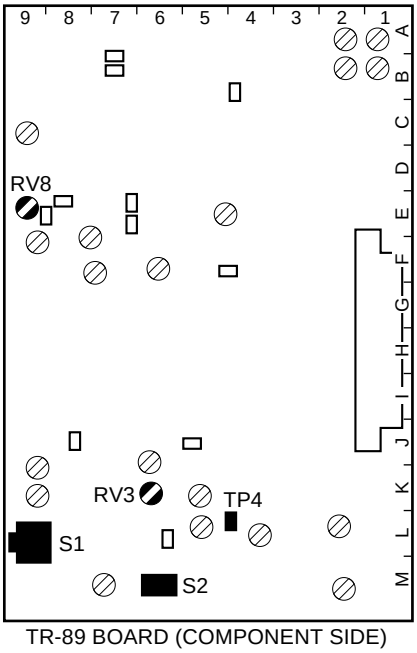
- Connect a completely adjusted CCU-355 to the CA-705.
- Supply the 1 kHz, 0 dBs sine wave from the low frequency oscillator to INCOM connector on the CCU-355 rear panel.
- S5 (RTS/2W/4W) /AU-98 board (CCU-355) → 4W

To be extended: TR-89 board
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP4/TR-89 board
Adjustment point: ◓RV8 (INCAM LEVEL)/
TR-89 board
Specification: 220 ±10 mV p-p



Setting after adjustment

- Reset S5 switch to the former position.



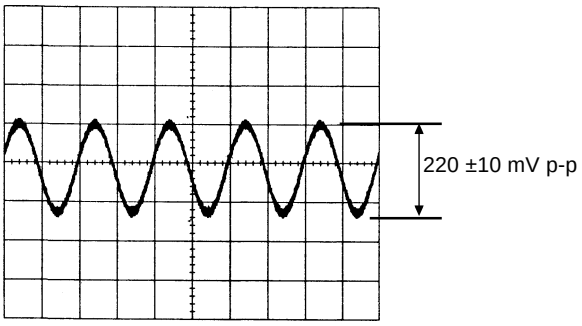
TR-89 BOARD (COMPONENT SIDE)

2-5-11. EARPHONE Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- Supply the 1 kHz, 0 dBs sine wave from the low frequency oscillator to INCOM connector on the CCU-355 rear panel.
- S6/TR-89 board → INCAM
- S5 (RTS/2W/4W) /AU-98 board (CCU-355) → 4W

To be extended: TR-89 board
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP16/TR-89 board
Adjustment point: ⊘RV15 (OUT LEVEL) /
TR-89 board
Specification: 220 ±10 mV p-p



Setting after adjustment

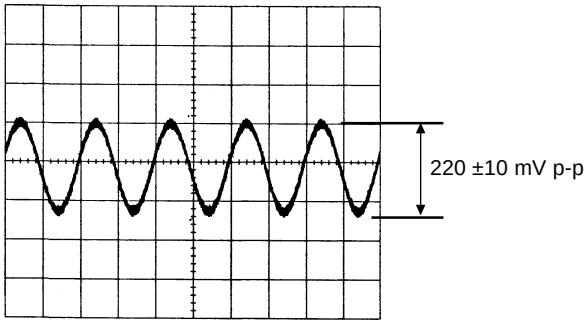
- Reset S5 and S6 switches to the former positions.

2-5-12. PGM Demoduration Level Adjustment

Preparation

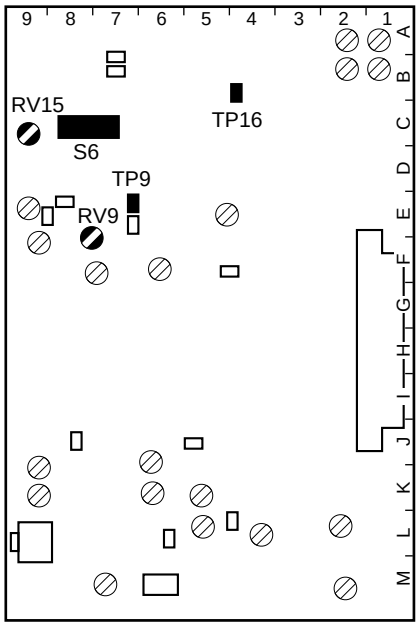
- Connect a completely adjusted CCU-355 to the CA-705.
- Supply the 1 kHz, 0 dBs sine wave from the low frequency oscillator to PGM connector on the CCU-355 rear panel.
- S2 (PGM ATT) /AU-98 board (CCU-355) → ON

To be extended: TR-89 board
Equipment: Oscilloscope
Low frequency oscillator
Test point: TP9/TR-89 board
Adjustment point: ⊘RV9 (PGM LEVEL) /
TR-89 board
Specification: 220 ±10 mV p-p



Setting after adjustment

- S2 (PGM ATT) /AU-98 board (CCU-355) → OFF



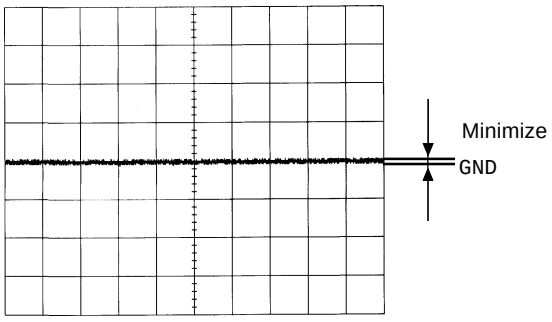
TR-89 BOARD (COMPONENT SIDE)

2-5-13. INCOM LEVEL Volume LOW Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- INCOM LEVEL volume (CA-705) → Counterclockwise

To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP14/TR-89 board
Adjustment point: ⊘RV10 (I VR LOW)/TR-89 board
Specification: Minimize

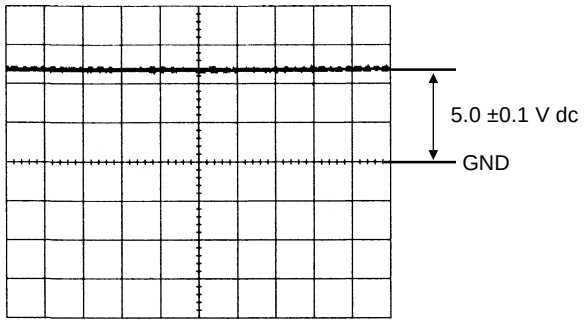


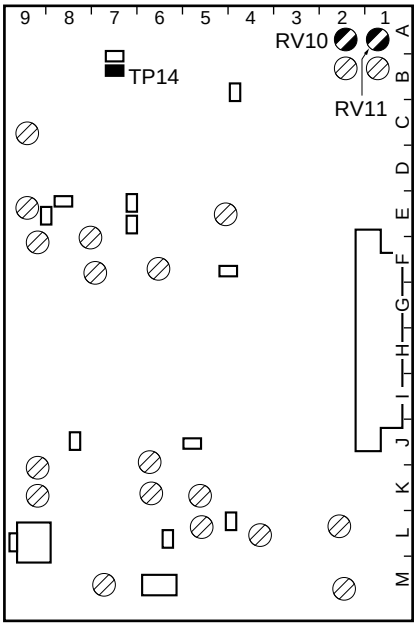
2-5-14. INCOM LEVEL Volume HIGH Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- INCOM LEVEL volume (CA-705) → Clockwise

To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP14/TR-89 board
Adjustment point: ⊘RV11 (I VR HIGH)/TR-89 board
Specification: 5.0 ±0.1 V dc





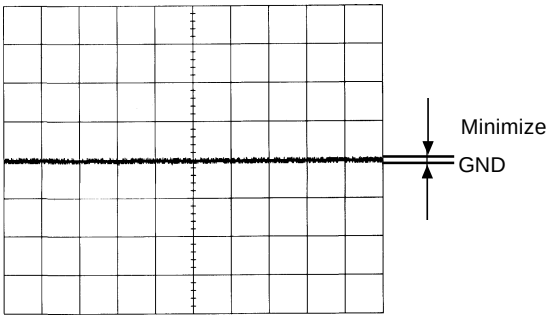
TR-89 BOARD (COMPONENT SIDE)

2-5-15. PGM LEVEL Volume LOW Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- PGM LEVEL volume (CA-705) → Counterclockwise

To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP15/TR-89 board
Adjustment point: ⊘RV12 (P VR LOW) /TR-89 board
Specification: Minimize

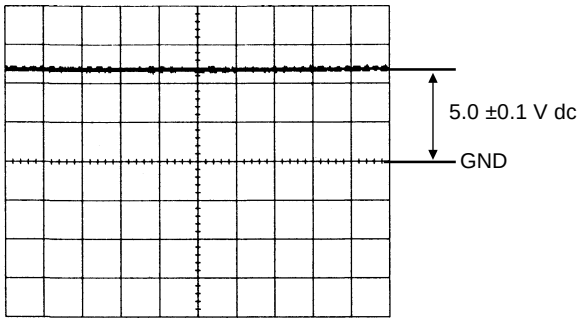


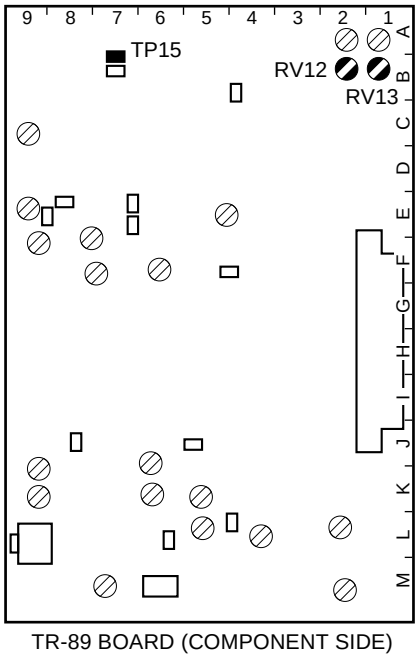
2-5-16. PGM LEVEL Volume HIGH Level Adjustment

Preparation

- Connect a completely adjusted CCU-355 to the CA-705.
- PGM LEVEL volume (CA-705) → Clockwise

To be extended: TR-89 board
Equipment: Oscilloscope
Test point: TP15/TR-89 board
Adjustment point: ⊘RV13 (P VR HIGH) /TR-89 board
Specification: 5.0 ±0.1 V dc





TR-89 BOARD (COMPONENT SIDE)

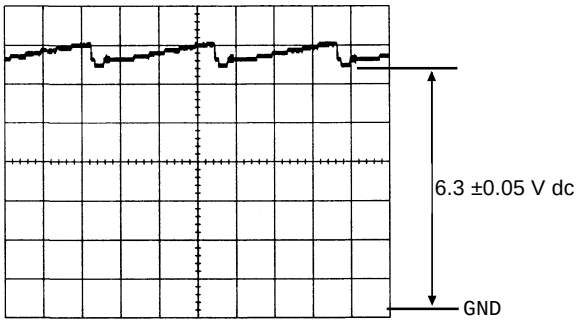
2-6. RX-25 Board Adjustment

Preparation

1. Connect a test signal generator to the RET1 connector on the rear panel l of the CCU-355 with a BNC cable. (75 Ω terminated)
2. Set each mode for the test signal generator as follows.
   - 5 STEP or 3 STEP
   - LINEALITY
   - APL 50 %
   - STD
   - B/W
3. S3(MD ADJUST)/MD-102 board → OFF

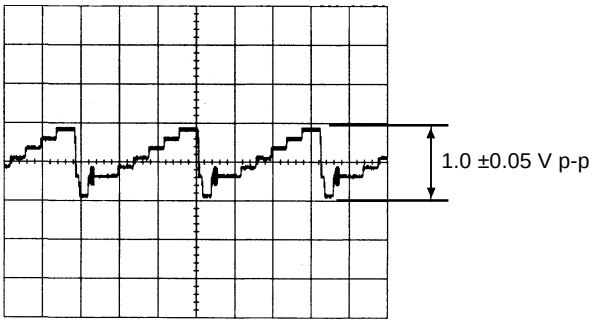
2-6-1. PLL Free Run Frequency Adjustment

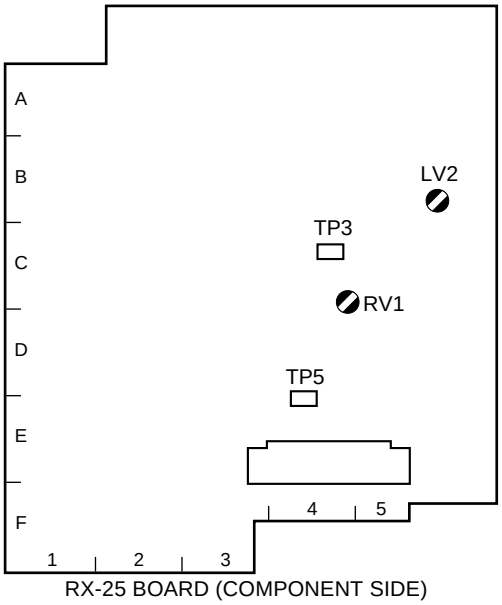
Board: RX-25 board
Equipment: Oscilloscope
Test signal generator
Test point: TP3/RX-25 board
Adjustment point: ◓LV2/RX-25 board
Specification: 6.3 ±0.05 V dc



2-6-2. Return Video Level Adjustment

Board: RX-25 board
Equipment: Oscilloscope
Test signal generator
Test point: TP5/RX-25 board
Adjustment point: ◓RV1 (VIDEO LEVEL) /
RX-25 board
Specification: 1.0 ±0.05 V p-p

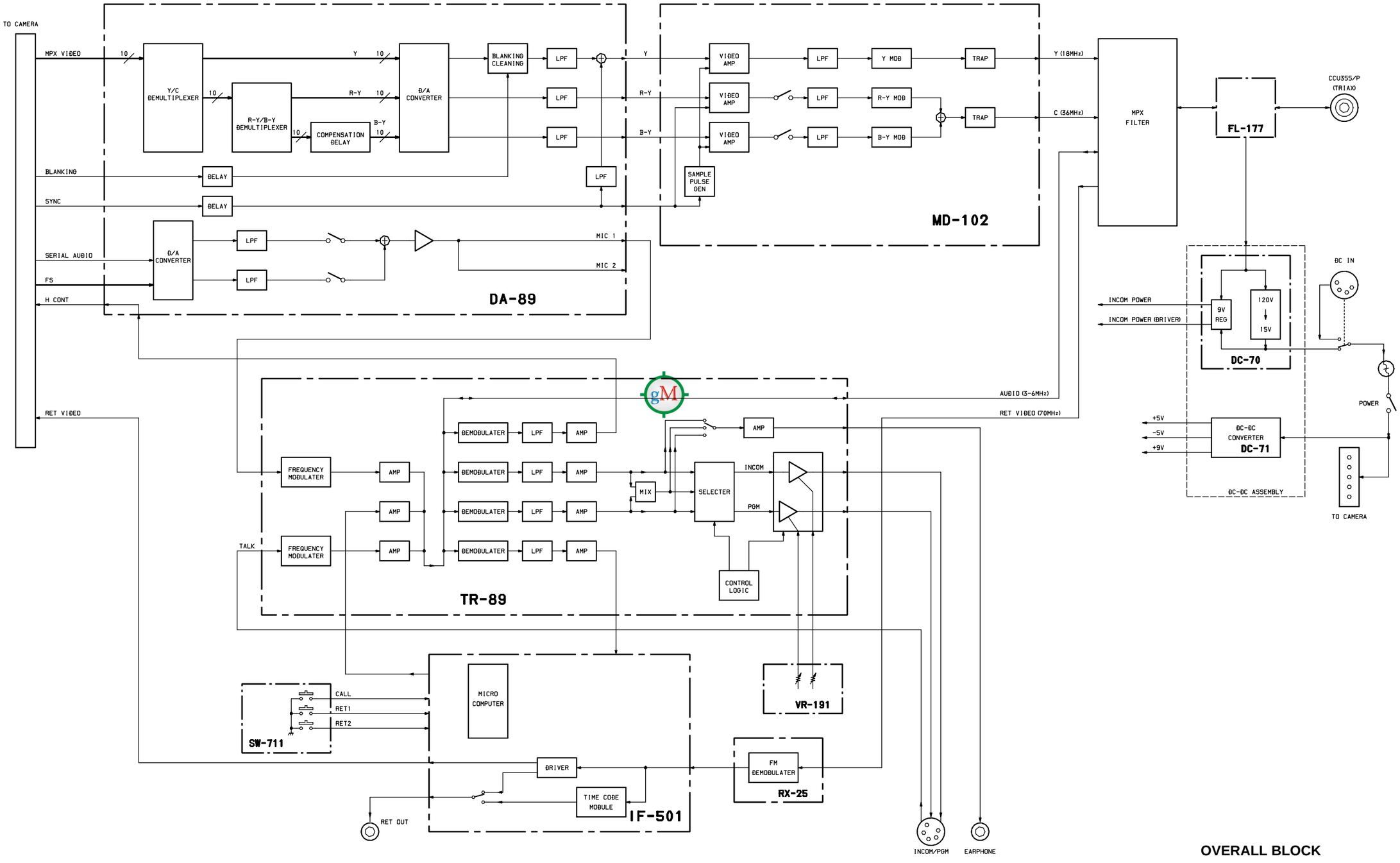




RX-25 BOARD (COMPONENT SIDE)

Section 3
Block Diagrams

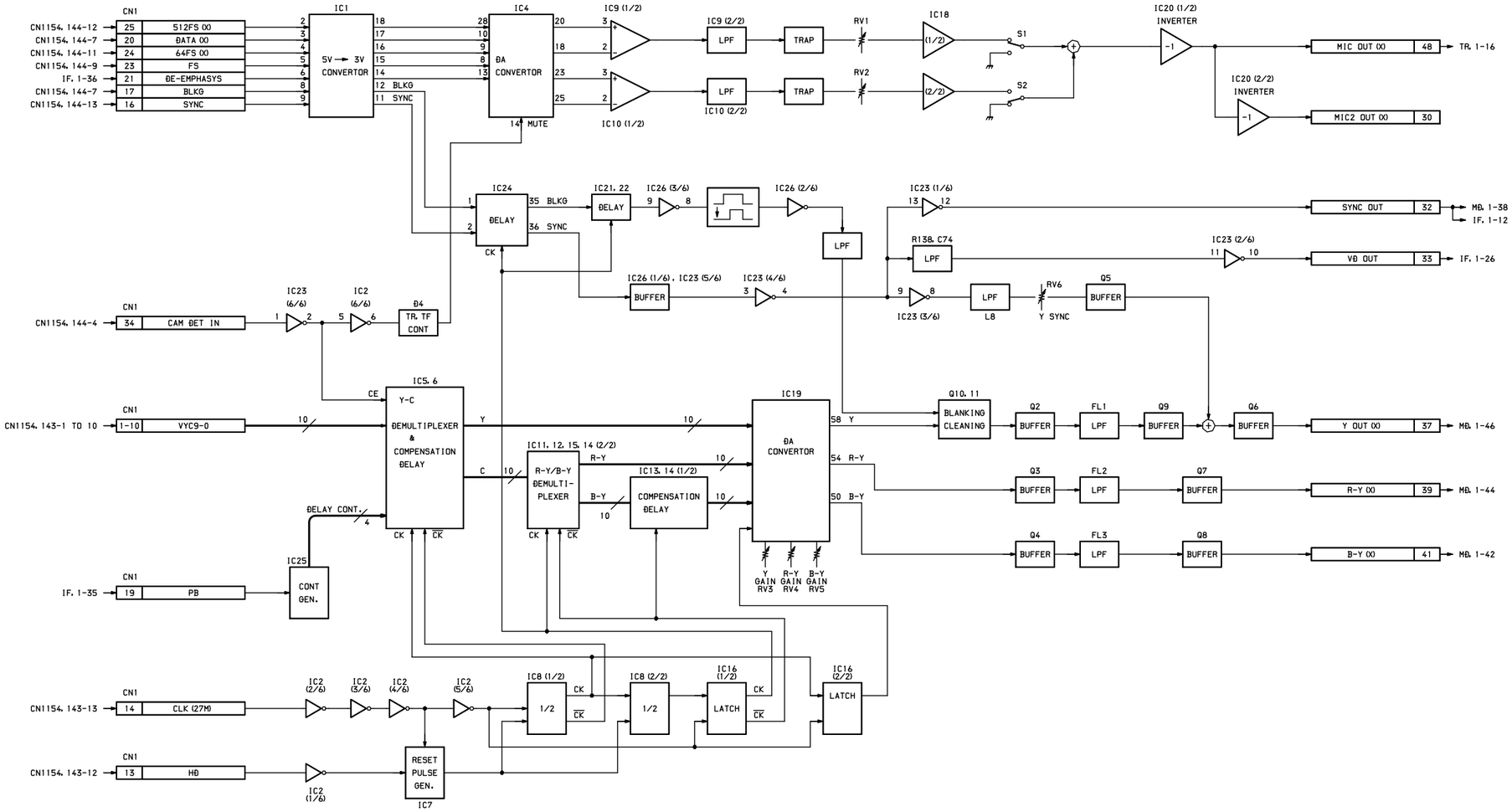
OVERALL BLOCK



OVERALL BLOCK

CA-705
CA-705P

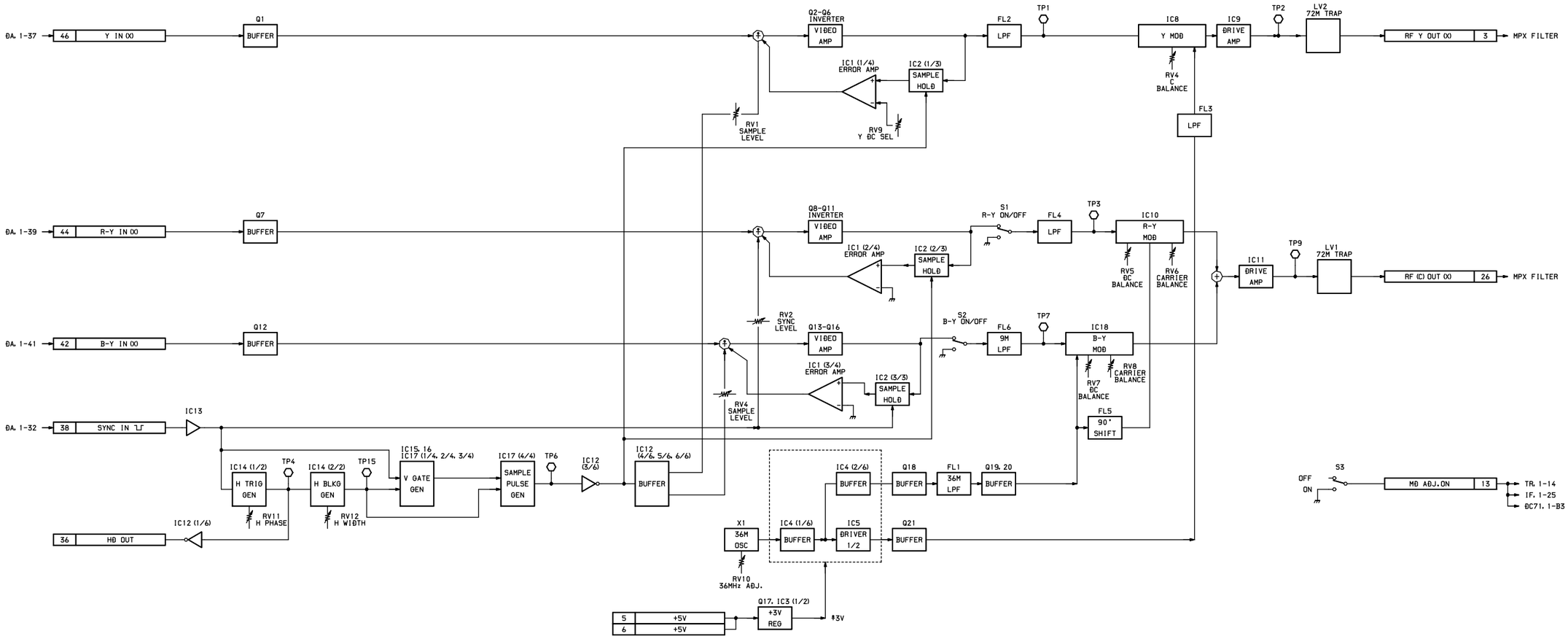
DA-89 BOARD



DA-89 BLOCK

CA-705
CA-705P

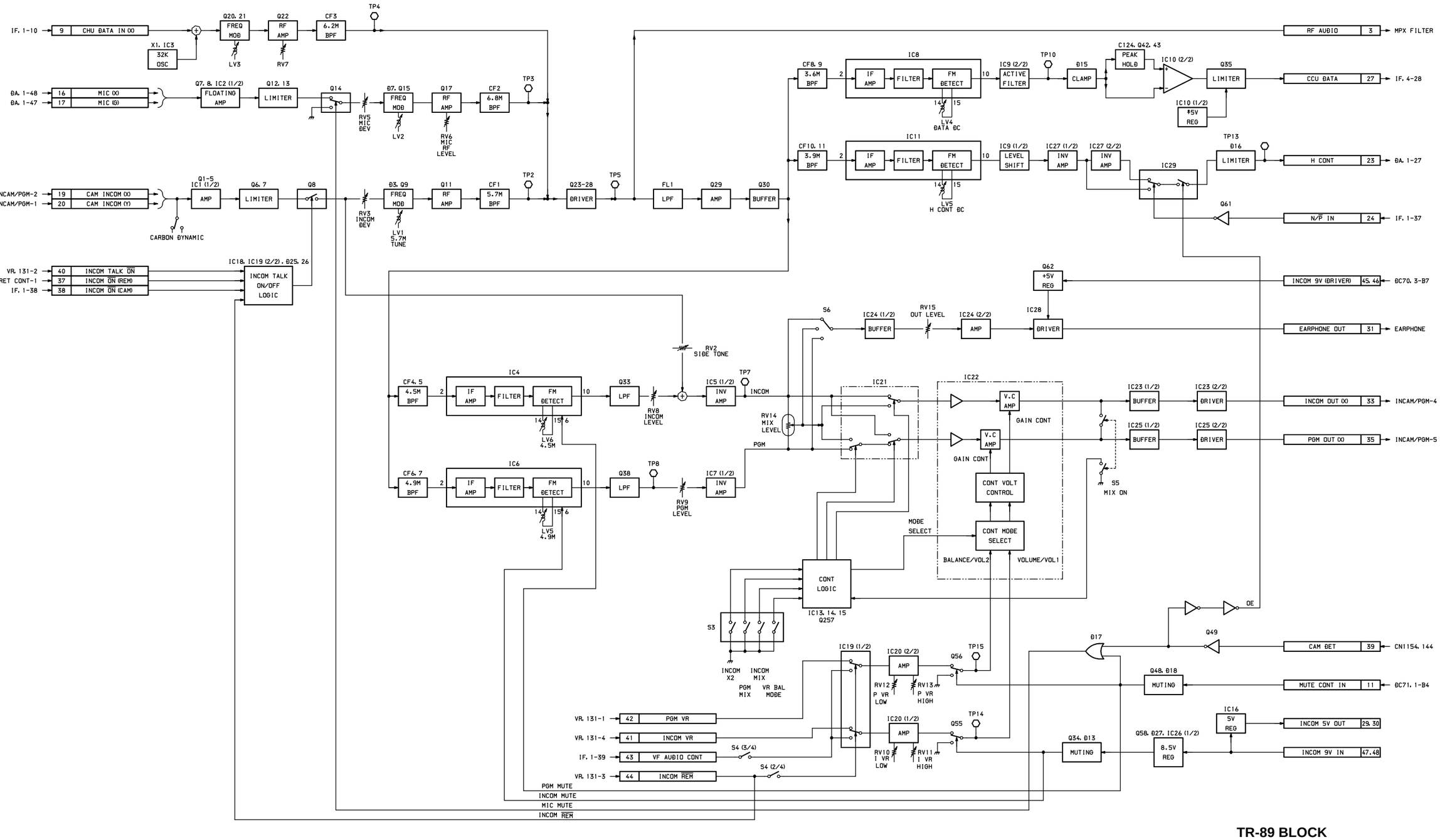
MD-102 BOARD



MD-102 BLOCK

CA-705
CA-705P

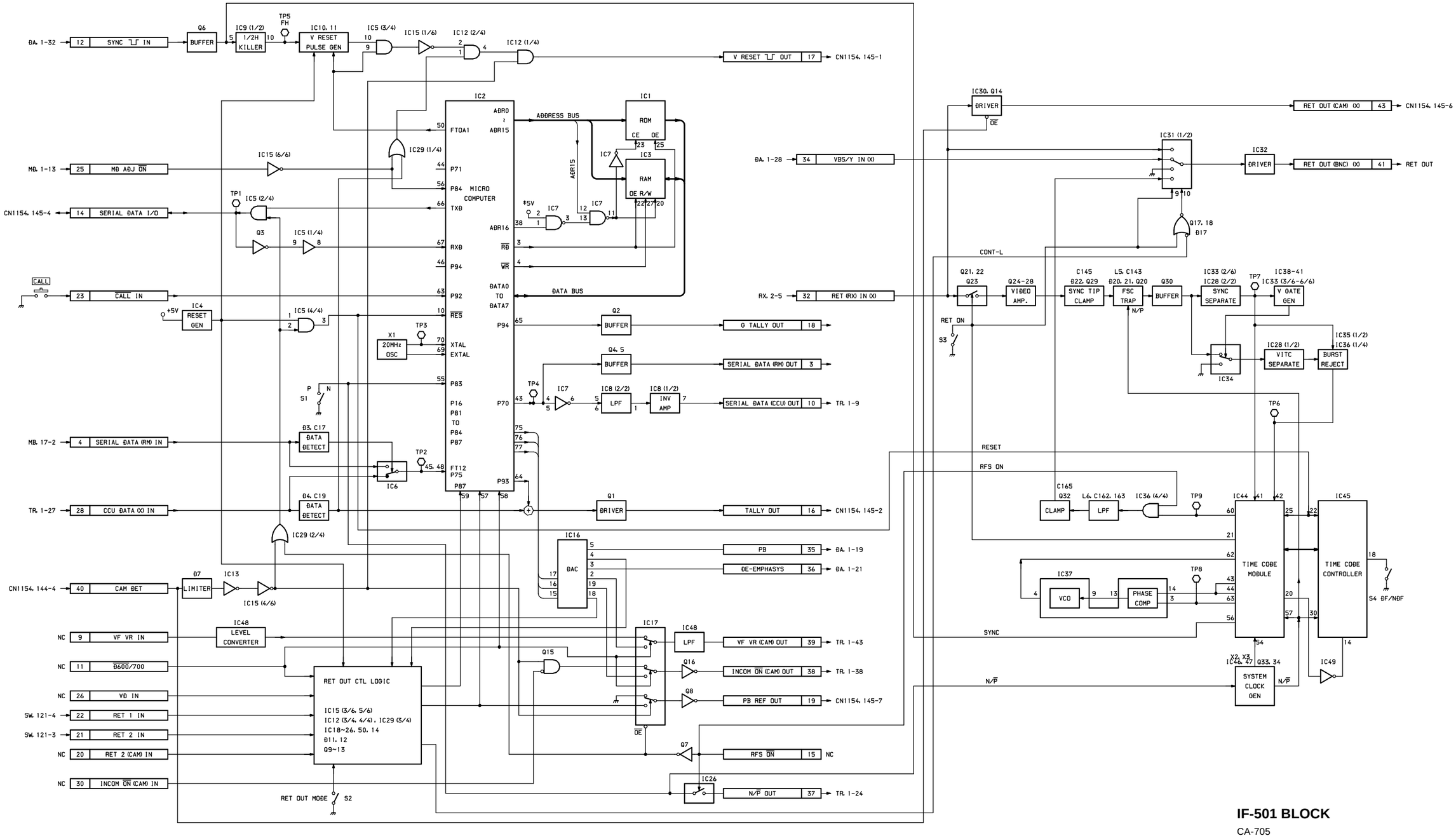
TR-89 BOARD



TR-89 BLOCK

CA-705
CA-705P

IF-501 BOARD

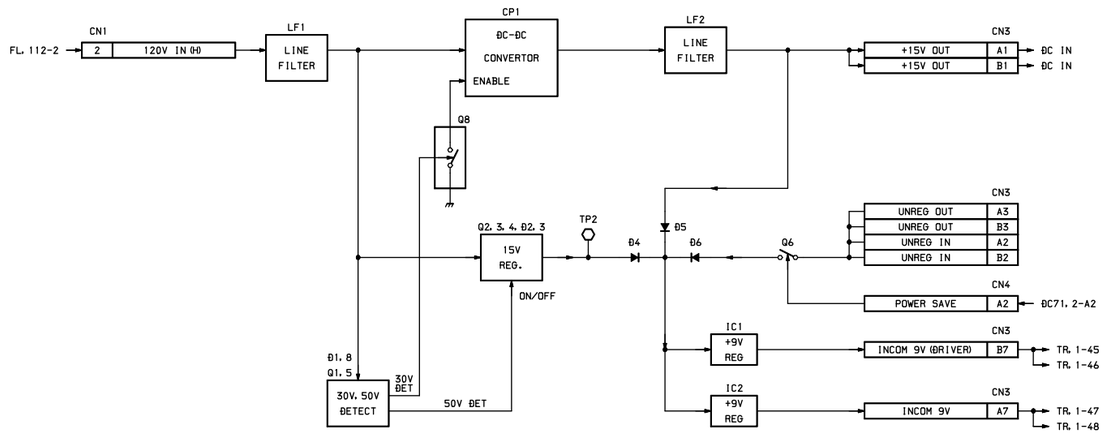


IF-501 BLOCK

CA-705
CA-705P

http://getMANUAL.com

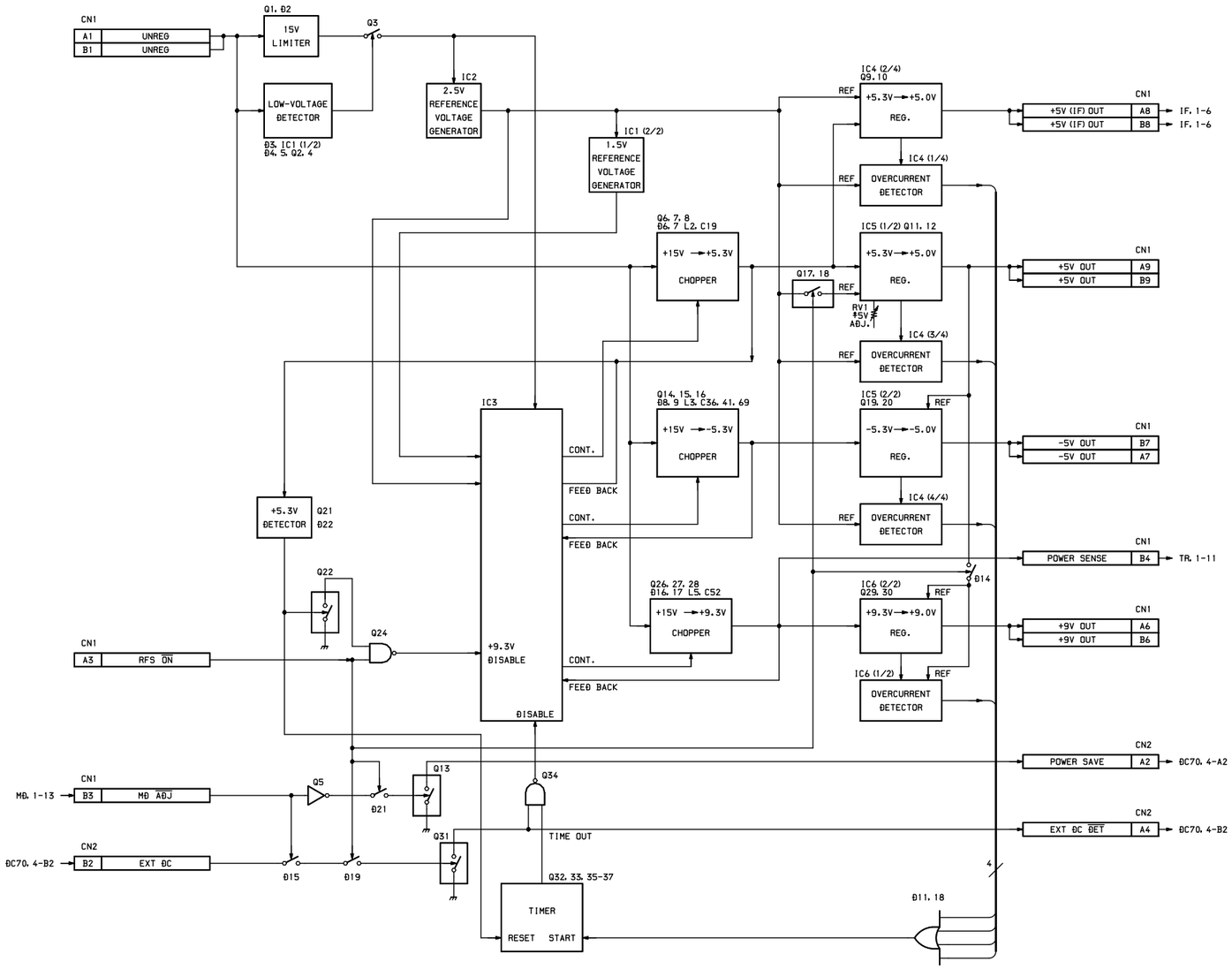
DC-70 BOARD



DC-70 BLOCK

CA-705
CA-705P

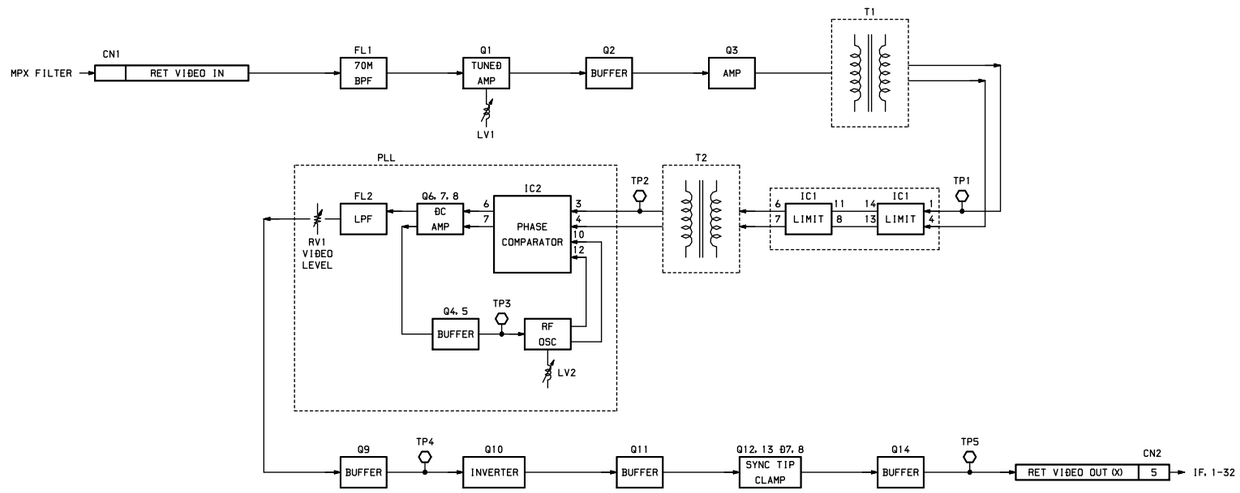
DC-71 BOARD



DC-71 BLOCK

CA-705
CA-705P

RX-25 BOARD



RX-25 BLOCK

CA-705
CA-705P

Section4
Schematic Diagrams and Board Layouts

4-1.Board Layouts

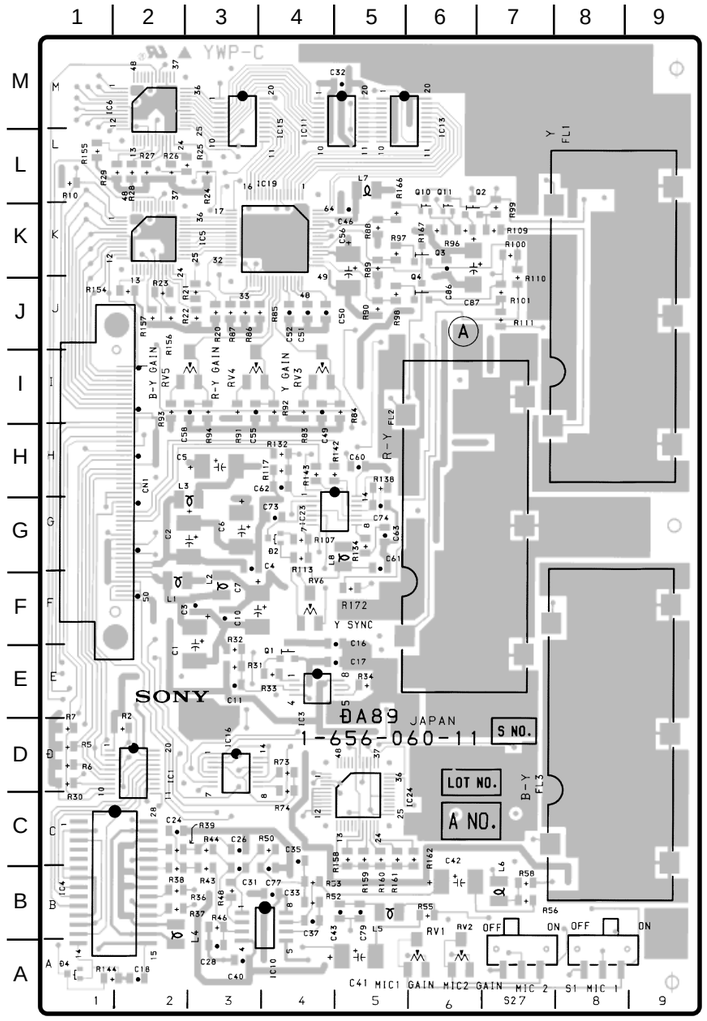
DA-89 BOARD

DA-89 BOARD (1-656-060-11)

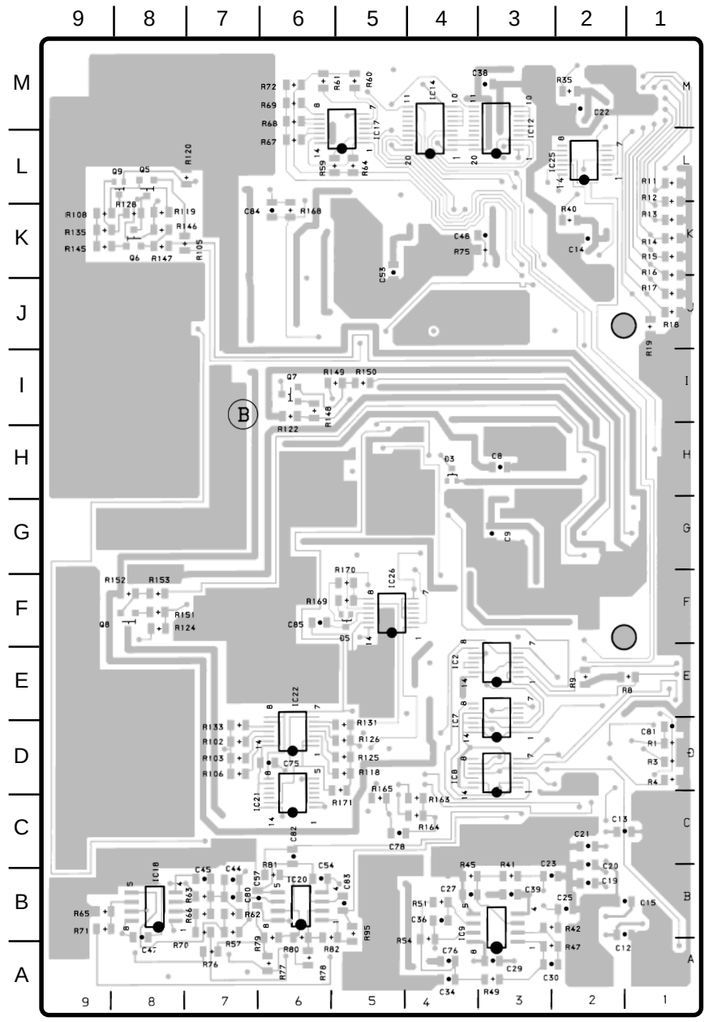
	CN1	H-2
	D2	G-4
	D4	A-1
*	D5	F-5
	FL1	L-8
	FL2	H-5
	FL3	C-7
	IC1	D-2
*	IC2	E-4
	IC3	D-4
	IC4	B-1
	IC5	K-3
	IC6	M-1
*	IC7	D-4
*	IC8	D-4
*	IC9	B-4
	IC10	A-4
	IC11	L-4
*	IC12	L-3
	IC13	L-6
*	IC14	M-4
	IC15	L-4
	IC16	D-3
*	IC17	L-5
*	IC18	B-8
	IC19	L-3
*	IC20	B-6
*	IC21	C-6
*	IC22	E-6
	IC23	G-4
	IC24	C-5
*	IC25	L-2
*	IC26	F-5
	L1	F-2
	L2	F-3
	L3	H-2
	L4	A-3
	L5	B-5
	L6	B-7
	L7	L-5
	L8	G-4
	Q1	E-4
	Q2	L-6
	Q3	K-6
	Q4	J-6
*	Q5	L-8
*	Q6	K-8
*	Q7	I-6
*	Q8	F-8
*	Q9	L-8
	Q10	L-6
	Q11	L-6
	RV1	B-6
	RV2	B–6
	RV3	I-4
	RV4	I-3
	RV5	I-2
	RV6	F-4
	S1	A-8
	S2	A-7

* : Soldering Side

LOT NO. D-6



DA-89 –COMPONENT SIDE–
1–656–060–11



DA-89 –SOLDERING SIDE–
1–656–060–11

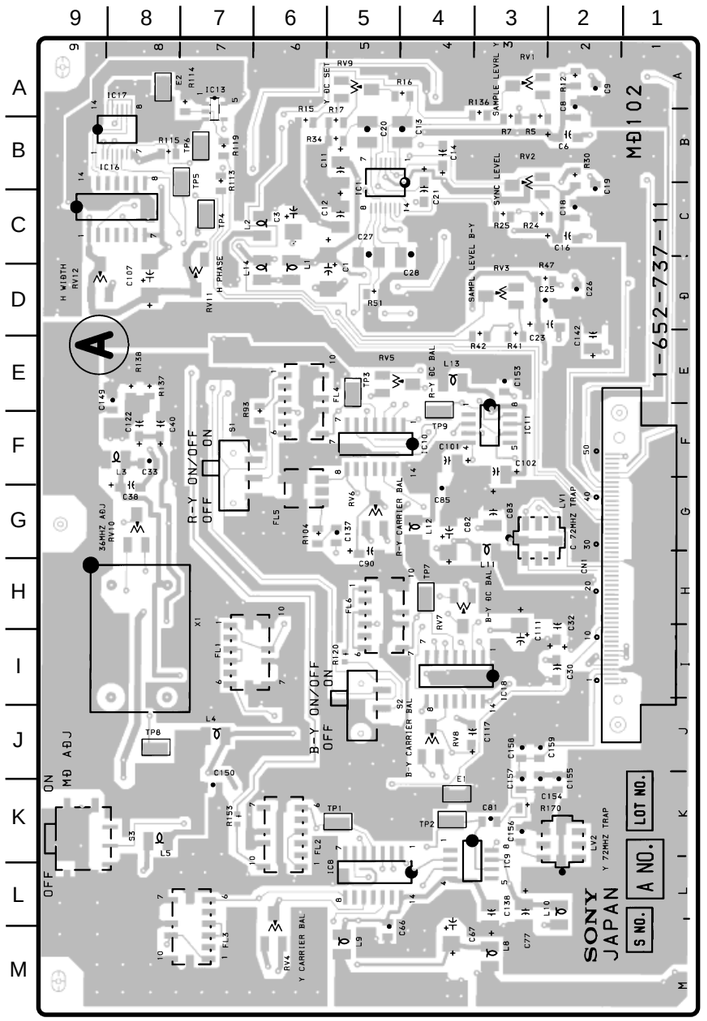
MD-102 BOARD

MD-102 BOARD (1-652-737-11)

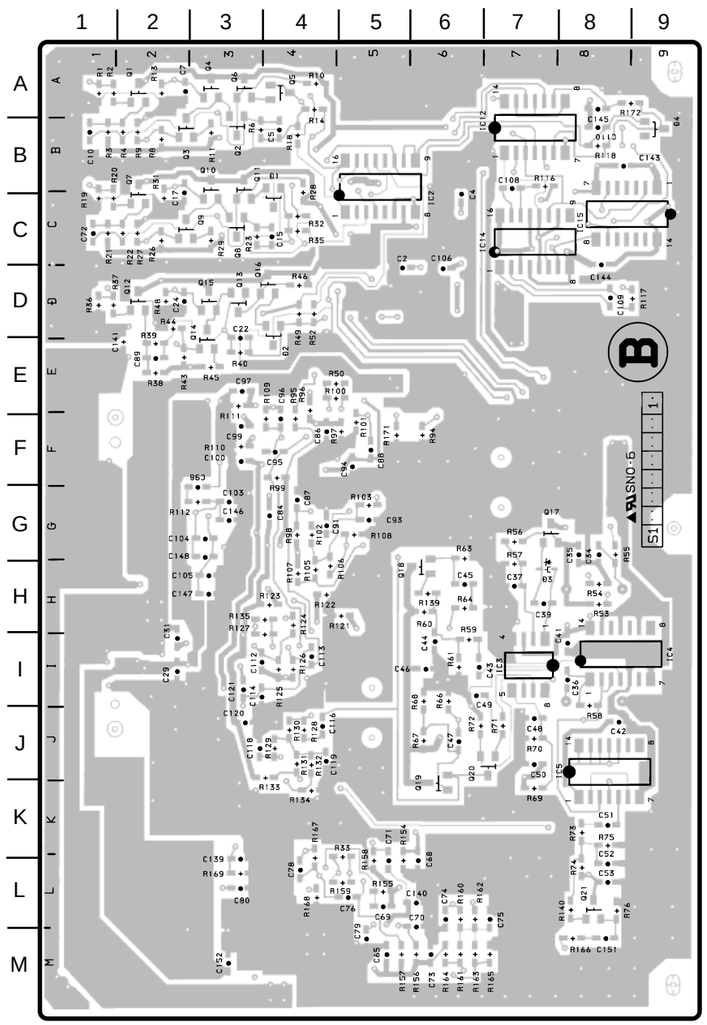
	CN1	H-2	
*	D1	B-4	
*	D2	E-4	
*	D3	H-7	
*	D4	B-9	
	E1	K-4	
	E2	A-8	
	FL1	I-7	
	FL2	K-6	
	FL3	M-7	
	FL4	E-5	
	FL6	H-5	
	IC1	C-5	
*	IC2	C-6	
*	IC3	I-7	
*	IC4	I-9	
*	IC5	J-7	
	IC8	L-5	
	IC9	L-3	
	IC10	F-4	
	IC11	F-3	
*	IC12	B-7	
	IC13	A-7	
*	IC14	C-7	
*	IC15	C-8	
	IC16	B-9	
	IC17	A-8	
	IC18	I-3	
	LV1	G-2	
	LV2	K-2	
	L1	D-6	
	L2	C-7	
	L3	F-8	
	L4	J-7	
	L5	K-8	
	L8	M-3	
	L9	M-5	
	L10	L-2	
	L11	H-3	
	L12	G-4	
	L13	E-4	
	L14	D-7	
*	Q1	A-2	
*	Q2	B-3	
*	Q3	B-2	
*	Q4	A-3	
*	Q5	A-4	
*	Q6	A-3	
*	Q7	B-2	
*	Q8	C-3	
*	Q9	C-3	
*	Q10	B-3	
*	Q11	B-3	
*	Q12	D-2	
*	Q13	D-3	
*	Q14	D-3	
*	Q15	D-3	
*	Q16	D-3	
*	Q17	G-7	
*	Q18	H-5	
*	Q19	K-6	
*	Q20	J-6	
*	Q21	L-8	
	RV1	A-3	
	RV2	B-3	
	RV3	D-3	
	RV4	M-6	
	RV5	E-5	
	RV6	G-5	
	RV7	H-4	
	RV8	J-4	
	RV9	A-5	
	RV10	G-8	
	RV11	D-7	
	RV12	D-9	
	S1	F-7	
	S2	J-4	
	S3	K-8	
	TP1	K-5	
	TP2	K-4	
	TP3	E-5	
	TP4	C-7	
	TP5	C-7	
	TP6	B-7	
	TP7	H-4	
	TP8	J-8	
	TP9	F-4	
	X1	H-7	

* : Soldering Side

LOT No. K-1



MD-102 –COMPONENT SIDE–
1–652–737–11



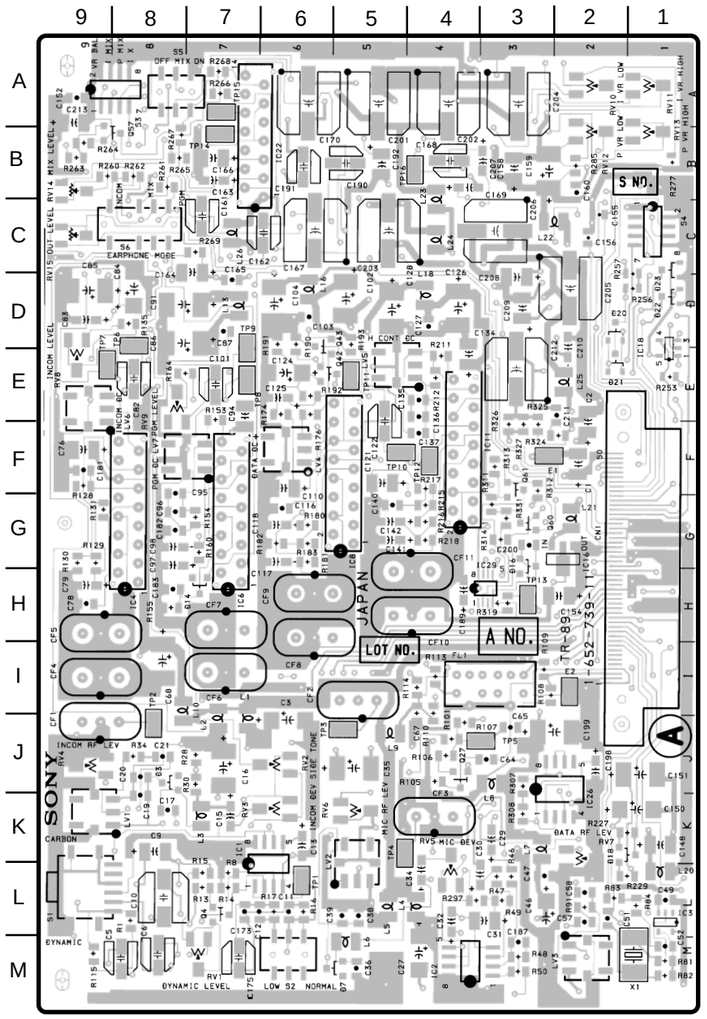
MD-102 –SOLDERING SIDE–
1–652–737–11

TR-89 BOARD

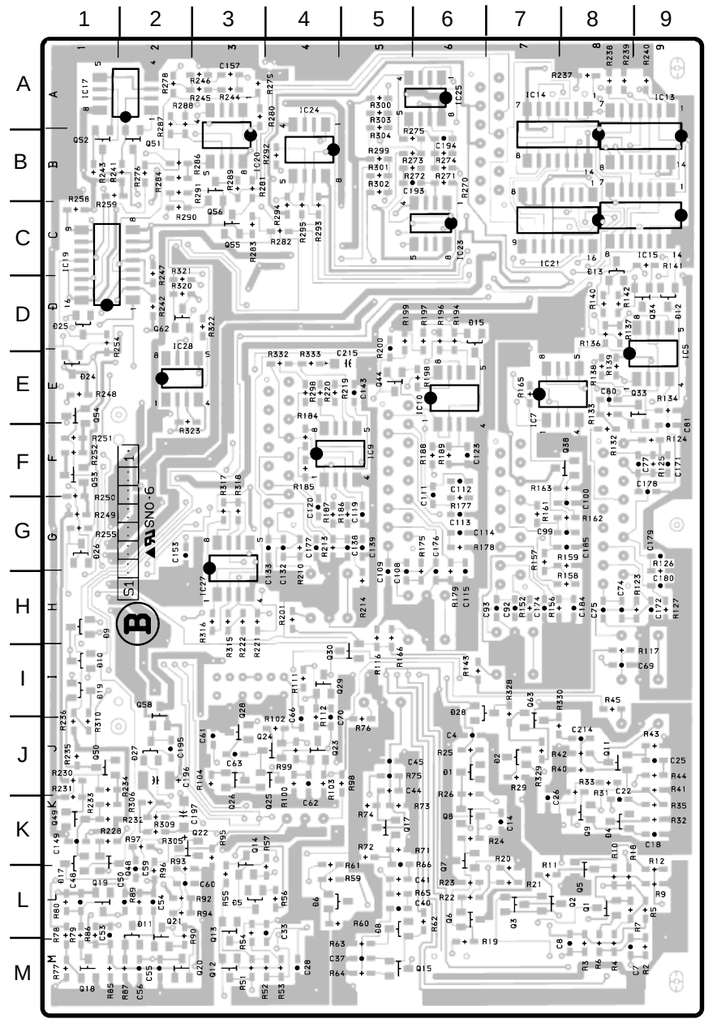
TR-89 BOARD (1-652-739-11)

CF1	J-8	IC26	J-2	* Q50	J-1
CF2	I-5	* IC27	G-3	* Q53	F-1
CF3	K-4	* IC28	E-2	* Q54	E-1
CF4	I-8	IC29	H-3	* Q55	C-3
CF5	H-9			* Q56	B-3
CF6	I-7	LV1	K-9	Q57	B-8
CF7	H-7	LV2	K-5	* Q58	I-2
CF8	H-5	LV3	M-2	Q60	G-3
CF9	H-6	LV4	F-6	Q61	F-3
CF-10	H-4	LV5	E-5	* Q62	D-2
CF-11	H-5	LV6	E-9		
		LV7	F-7	RV1	M-7
CN1	H-1			RV2	J-6
		L1	J-7	RV3	K-6
* D1	J-6	L2	J-7	RV4	J-9
* D2	J-7	L3	K-7	RV5	L-4
D3	J-8	L4	L-4	RV6	K-5
* D4	K-8	L5	L-5	RV7	K-2
* D5	L-3	L6	M-5	RV8	E-9
* D6	L-4	L7	K-3	RV9	E-8
D7	M-5	L8	J-3	RV10	A-2
* D8	L-5	L9	J-5	RV11	A-1
* D9	H-1	L10	I-7	RV12	B-2
* D10	I-1	L13	D-7	RV13	B-1
* D11	L-2	L16	D-6	RV14	B-9
* D12	D-9	L18	D-4	RV15	C-9
* D13	C-8	L20	L-1		
D14	H-7	L21	G-2	S1	L-9
* D15	D-6	L22	C-2	S2	M-6
D16	G-3	L23	B-4	S3	A-8
* D17	K-1	L24	C-4	S4	C-1
D18	K-1	L25	E-2	S5	A-8
* D19	I-1	L26	C-7	S6	C-8
D20	D-2				
D21	E-2	* Q1	L-8	TP1	L-6
D22	D-1	* Q2	L-7	TP2	J-8
D23	C-1	* Q3	L-7	TP3	J-5
* D24	E-1	Q4	L-7	TP4	K-4
* D25	D-1	* Q5	L-8	TP5	J-3
* D26	G-1	* Q6	L-6	TP6	D-8
* D27	J-2	* Q7	K-6	TP7	E-9
		* Q8	K-6	TP8	E-7
E1	F-3	* Q9	K-8	TP9	E-7
E2	I-2	* Q11	J-8	TP10	F-5
		* Q12	M-3	TP11	E-5
FL1	I-3	* Q13	L-3	TP12	F-4
		* Q14	K-3	TP13	H-3
IC1	L-6	* Q15	M-5	TP14	B-7
IC2	M-4	* Q17	K-5	TP15	A-7
IC3	L-1	* Q18	M-1	TP16	B-4
IC4	H-8	* Q19	L-1		
* IC5	E-9	* Q20	M-2	X1	M-1
IC6	H-7	* Q21	L-2		
* IC7	E-8	* Q22	K-2		
IC8	G-5	* Q23	J-4		
* IC9	F-5	* Q24	J-4		
* IC10	E-6	* Q25	J-4		
IC11	G-4	* Q26	J-3		
* IC13	B-9	Q27	J-4		
* IC14	B-7	* Q28	J-3		
* IC15	C-9	* Q29	I-4		
IC16	G-2	* Q30	I-5		
IC18	E-1	* Q33	E9		
* IC19	C-1	* Q34	D9		
* IC20	B-3	* Q38	F-8		
* IC21	C-7	Q42	E-6		
IC22	B-6	Q43	D-6		
* IC23	C-6	* Q44	E-5		
* IC24	B-4	* Q48	K-1		
* IC25	A-6	* Q49	K-1		

* : Soldering Side
LOT NO. I-4



TR-89 –COMPONENT SIDE–
1–652–739–11



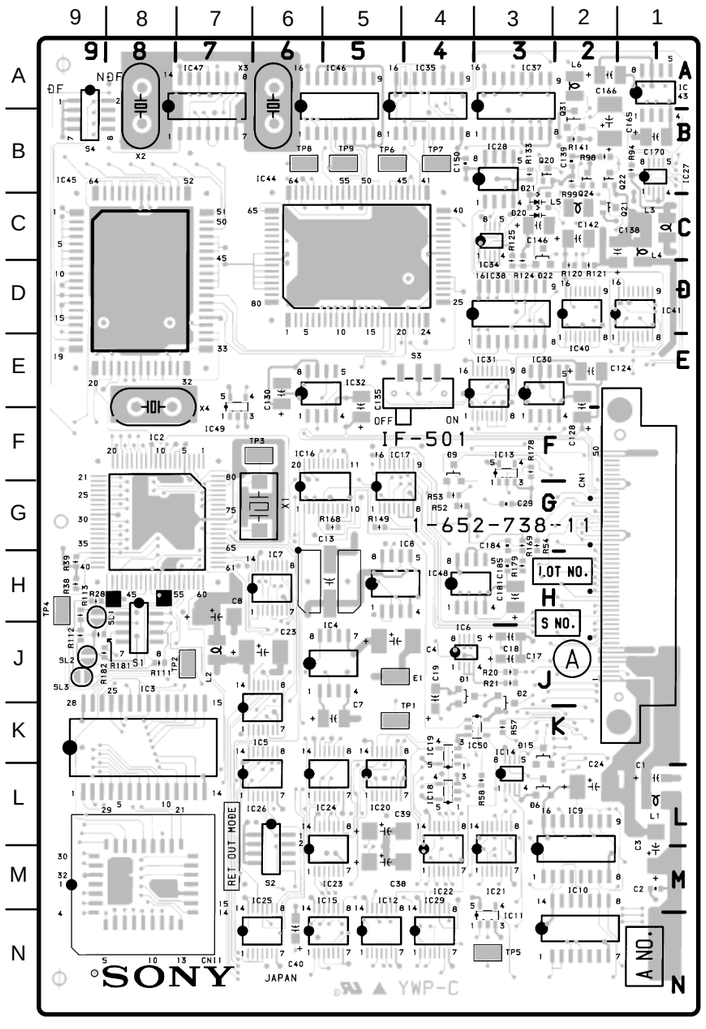
TR-89 –SOLDERING SIDE–
1–652–739–11

IF-501 BOARD

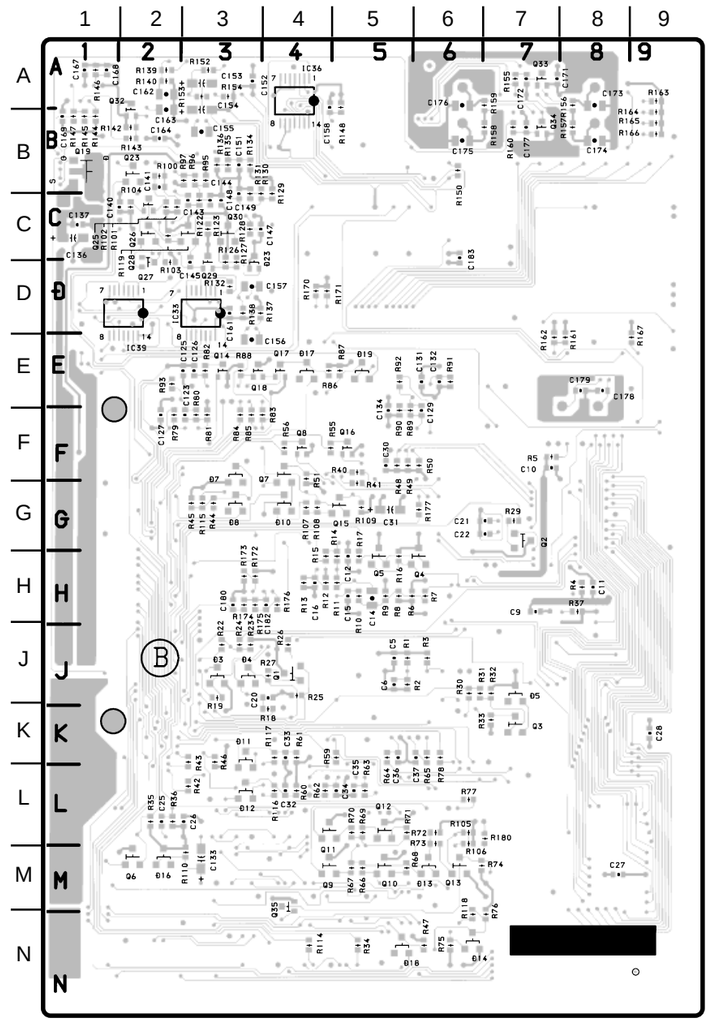
IF-501 BOARD (1-652-738-11)

	CNI1	N-7	
	CN1	G-2	
	D1	J-4	
	D2	J-3	
*	D3	J-3	
*	D4	J-3	
*	D5	J-7	
	D6	L-3	
*	D7	F-3	
*	D8	G-3	
	D9	F-4	
*	D10	G-4	
*	D11	K-3	
*	D12	L-3	
*	D13	M-6	
*	D14	N-6	
	D15	K-3	
*	D16	M-2	
*	D17	E-4	
*	D18	N-5	
*	D19	E-5	
	D20	C-3	
	D21	B-3	
	D22	D-3	
*	D23	C-4	
	E1	J-4	
	IC1	N-7	
	IC2	F-8	
	IC3	J-8	
	IC4	H-5	
	IC5	K-6	
	IC6	J-4	
	IC7	H-6	
	IC8	G-5	
	IC9	L-2	
	IC10	M-2	
	IC11	N-3	
	IC12	M-5	
	IC13	F-3	
	IC14	K-3	
	IC15	M-6	
	IC16	F-6	
	IC17	F-5	
	IC18	L4	
	IC19	K4	
	IC20	L-5	
	IC21	M-3	
	IC22	M-4	
	IC23	M-5	
	IC24	L-6	
	IC25	M-7	
	IC26	L-7	
	IC27	B-1	
	IC28	B-3	
	IC29	M-4	
	IC30	E-3	
	IC31	E-3	
	IC32	E-5	
*	IC33	D-2	
	IC34	D-3	
	IC35	A-4	
*	IC36	A-4	
	IC37	A-3	
	IC38	D-3	
*	IC39	E-2	
	IC40	E-2	
	IC41	D-1	
	IC44	B-6	
	IC45	B-9	
	IC46	A-5	
	IC47	A-7	
	IC48	H-4	
	IC49	F-7	
	IC50	K-3	
	L1	L-1	
	L2	J-7	
	L3	C-1	
	L4	C-1	
	L5	C-3	
	L6	A-2	
*	Q1	J-4	
*	Q2	G-7	
*	Q3	K-7	
*	Q4	H-6	
*	Q5	H-5	
*	Q6	M-2	
*	Q7	F-3	
*	Q8	F-4	
*	Q9	M-4	
*	Q10	M-5	
*	Q11	L-4	
*	Q12	L-5	
*	Q13	M-6	
*	Q14	E-3	
*	Q15	G-5	
*	Q16	F-5	
*	Q17	E-4	
*	Q18	E-3	
*	Q19	B-1	
	Q20	B-3	
	Q21	C-1	
	Q22	B-1	
*	Q23	B-2	
	Q24	B-2	
*	Q25	C-1	
*	Q26	C-2	
*	Q27	D-2	
*	Q28	D-2	
*	Q29	D-3	
*	Q30	C-3	
*	Q31	B-2	
*	Q32	A-1	
*	Q33	A-7	
*	Q34	B-7	
*	Q35	M-4	
	S1	J-8	
	S2	M-6	
	S3	E-4	
	S4	B-9	
	TP1	H-5	
	TP2	J-7	
	TP3	F-7	
	TP4	H-9	
	TP5	N-3	
	TP6	B-5	
	TP7	B-4	
	TP8	B-6	
	TP9	B-5	
	X1	G-6	
	X2	B-8	
	X3	A-7	
	X4	E-7	

* : Soldering Side
LOT NO. H-2



IF-501 –COMPONENT SIDE–
1–652–738–11



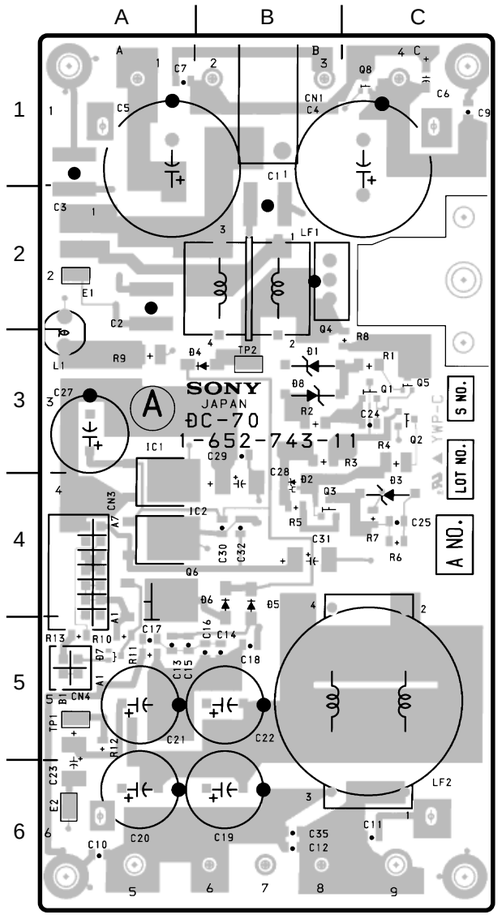
IF-501 –SOLDERING SIDE–
1–652–738–11

DC-70 BOARD

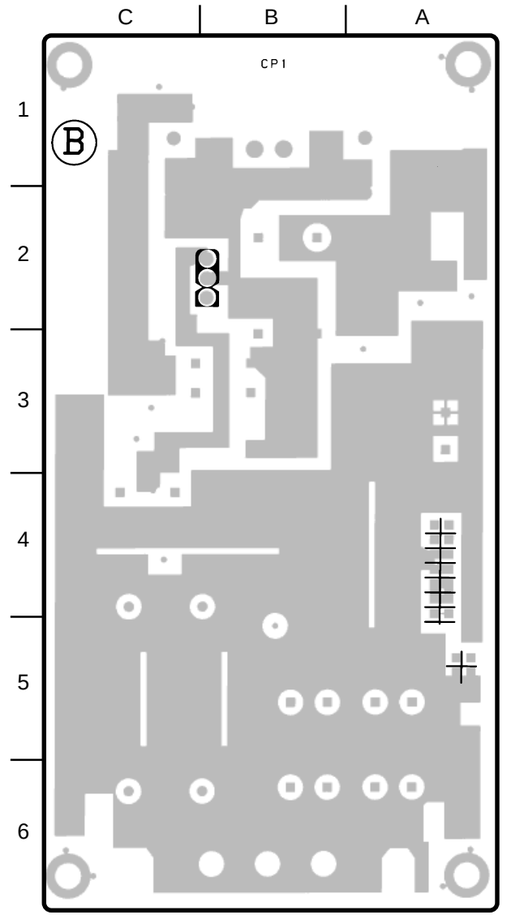
DC-70 BOARD (1-652-743-11)

CN1	B-1
CN3	A-4
CN4	A-5
* CP1	B-1
D1	B-3
D2	B-4
D3	C-4
D4	A-3
D5	B-4
D6	B-4
D7	A-5
D8	B-3
E1	A-2
E2	A-6
IC1	A-3
IC2	A-4
LF1	B-2
LF2	C-6
L1	A-3
Q1	C-3
Q2	C-3
Q3	B-4
Q4	B-2
Q5	C-3
Q6	A-4
Q8	C-1
TP1	A-5
TP2	B-3

* : Soldering Side
LOT NO. C-4



DC-70 –COMPONENT SIDE–
1–652–743–11



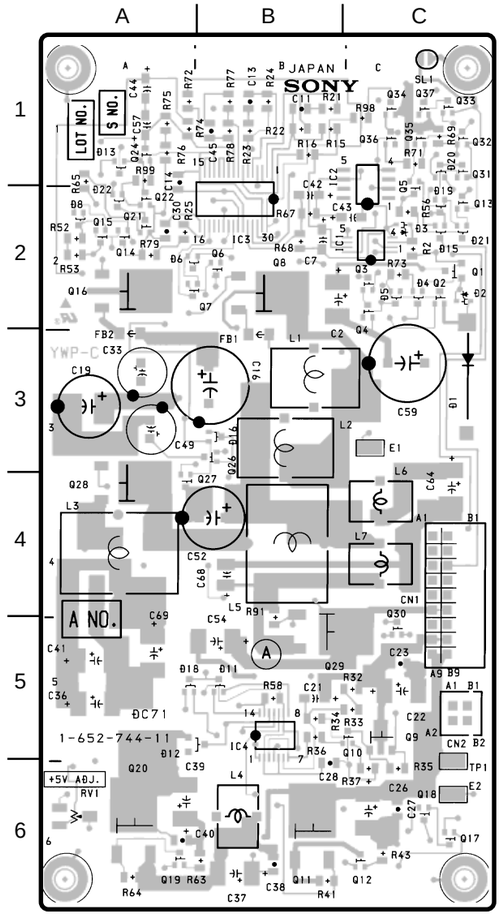
DC-70 –SOLDERING SIDE–
1–652–743–11

DC-71 BOARD

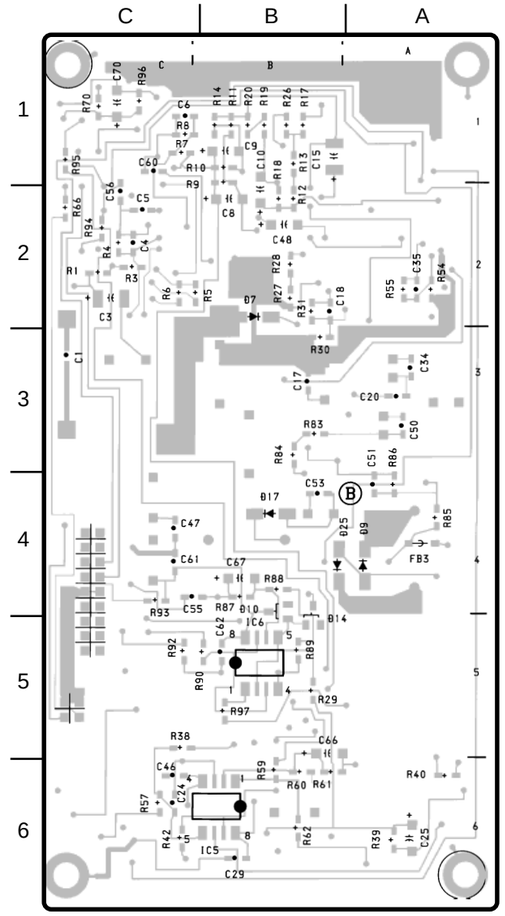
DC-71 BOARD (1-652-744-11)

CN1	C-4	Q1	C-2
CN2	C-5	Q2	C-2
		Q3	C-2
D1	C-3	Q4	C-3
D2	C-2	Q5	C-2
D3	C-2	Q6	B-2
D4	C-2	Q7	B-2
D5	C-2	Q8	B-2
D6	A-2	Q9	C-5
* D7	B-2	Q10	C-5
D8	A-2	Q11	B-6
* D9	A-4	Q12	C-6
* D10	B-4	Q13	C-2
D11	B-5	Q14	A-2
D12	A-5	Q15	A-2
D13	A-1	Q16	A-2
* D14	B-5	Q17	C-6
D15	C-2	Q18	C-6
D16	B-3	Q19	A-6
* D17	B-4	Q20	A-6
D18	A-5	Q21	A-2
D19	C-2	Q22	A-2
D20	C-1	Q24	A-1
D21	C-2	Q26	B-3
D22	A-2	Q27	B-4
* D25	A-4	Q28	A-4
		Q29	B-5
E1	C-3	Q30	C-4
E2	C-6	Q31	C-1
		Q32	C-1
FB1	B-3	Q33	C-1
FB2	A-3	Q34	C-1
* FB3	A-4	Q35	C-1
		Q36	C-1
IC1	B-2	Q37	C-1
IC2	B-1		
IC3	B-2	RV1	A6
IC4	B-5		
* IC5	B-6	TP1	C6
* IC6	B-5		
L1	B-3		
L2	B-3		
L3	A-4		
L4	B-6		
L5	B-4		
L6	C-3		
L7	C-4		

* : Soldering Side
LOT NO. A-1



DC-71 –COMPONENT SIDE–
1–652–744–11



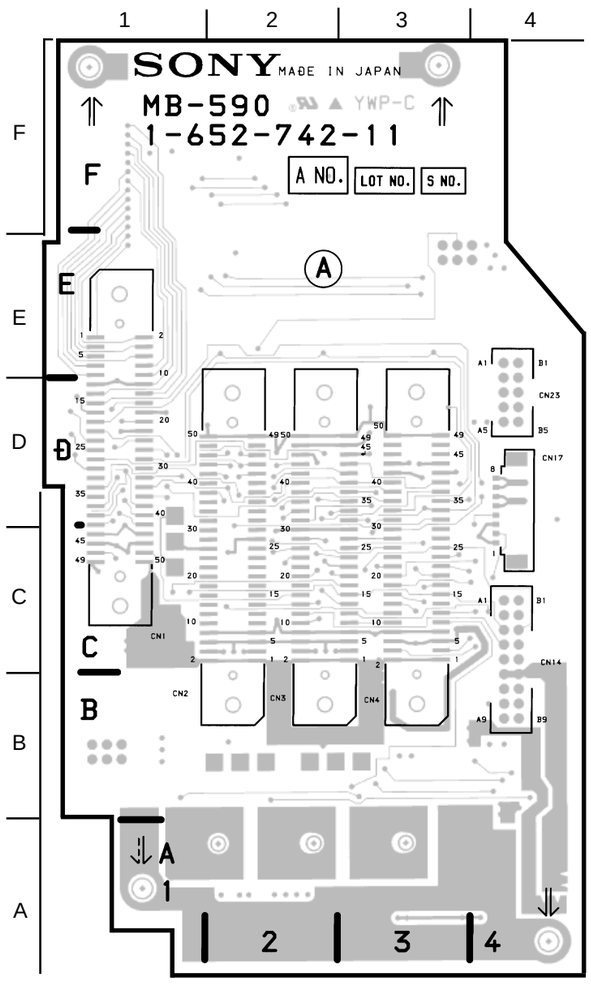
DC-71 –SOLDERING SIDE–
1–652–744–11

MB-590 BOARD

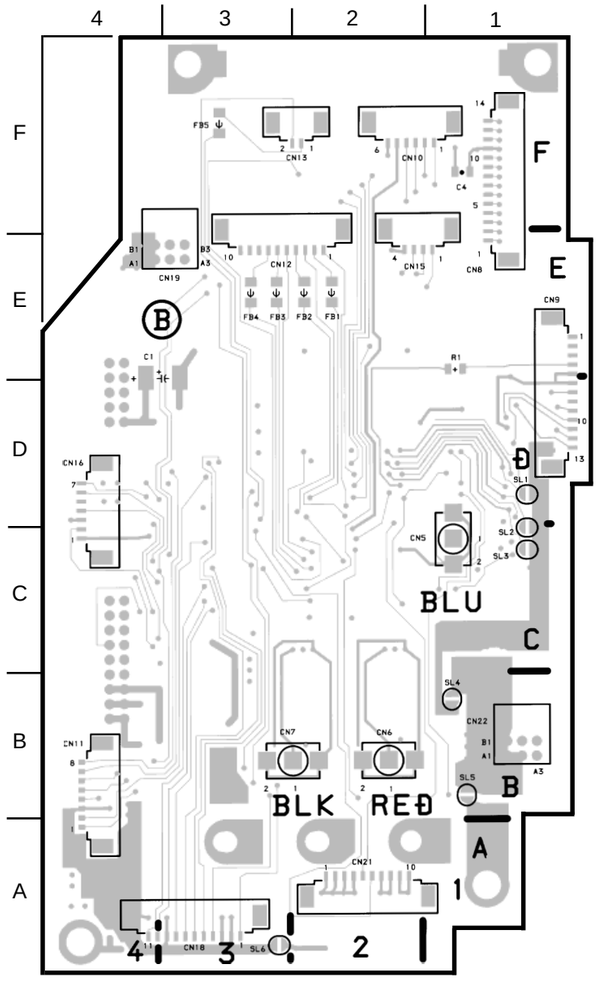
MB-590 B0ARD (1-652-742-11)

CN1	C-1
CN2	B-1
CN3	B-2
CN4	B-3
∗ CN5	C-2
∗ CN6	B-2
∗ CN7	B-3
∗ CN8	E-1
∗ CN9	E-1
∗ CN10	F-2
∗ CN11	B-4
∗ CN12	E-3
∗ CN13	F-2
CN14	C-4
∗ CN15	E-2
∗ CN16	D-4
CN17	D-4
∗ CN18	A-3
∗ CN19	E-3
∗ CN21	A-2
∗ CN22	B-1
CN23	D-4
∗ FB1	E-2
∗ FB2	E-2
∗ FB3	E-3
∗ FB4	E-3
∗ FB5	F-3

∗ : Soldering Side
LOT NO. F-3



MB-590 –COMPONENT SIDE–
1–652–742–11



MB-590 –SOLDERING SIDE–
1–652–742–11

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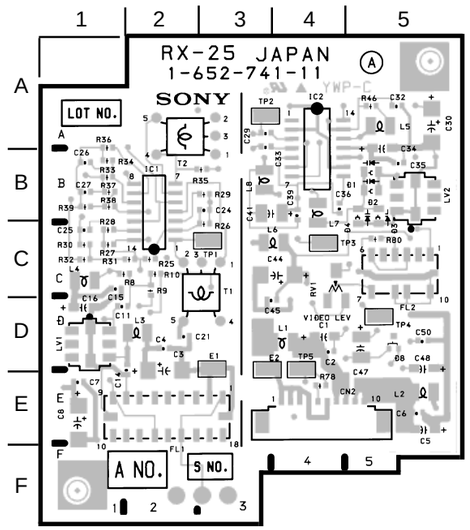
RX-25, CN-1154, FL-177, VR-191, SW-711

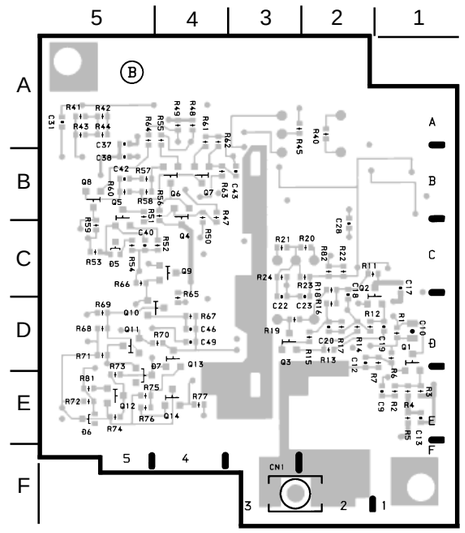
RX-25 BOARD (1-652-741-11)

* CN1	F-3	* Q1	D-1
CN2	E-4	* Q2	C-2
		* Q3	D-3
D1	B-4	* Q4	C-4
D2	B-5	* Q5	B-5
D3	C-5	* Q6	B-4
D4	C-4	* Q7	B-4
* D5	C-5	* Q8	B-5
* D6	E-5	* Q9	C-4
* D7	D-4	* Q10	D-5
D8	D-5	* Q11	D-5
		* Q12	E-5
E1	D-3	* Q13	D-4
E2	D-3	* Q14	E-4
FL1	F-2	RV1	C-4
FL2	D-5		
		TP1	C-3
IC1	B-2	TP2	A-3
IC2	A-4	TP3	C-4
		TP4	D-5
LV1	D-1	TP5	D-4
LV2	B-5		
		T1	C-3
L1	D-4	T2	B-2
L2	E-5		
L3	D-2		
L4	C-1		
L5	A-5		
L6	C-3		
L7	C-4		
L8	B-3		

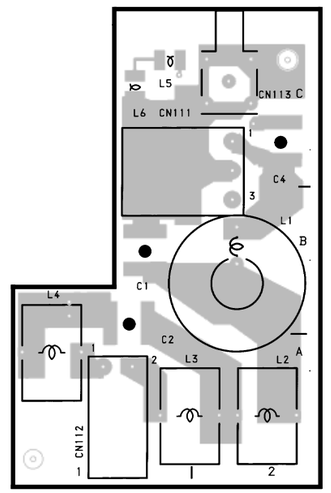
* : Soldering Side
LOT NO. A-1



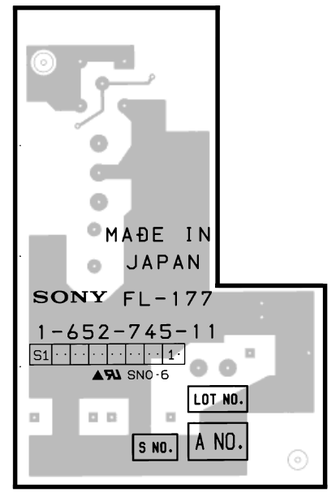
RX-25 –COMPONENT SIDE–
1–652–741–11



RX-25 –SOLDERING SIDE–
1–652–741–11



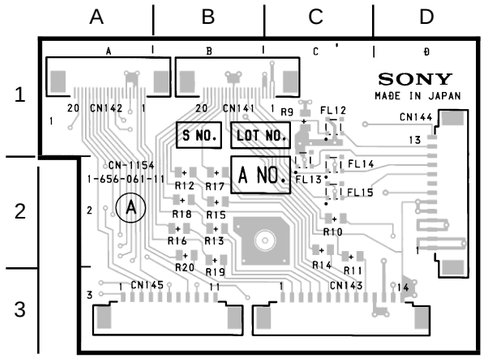
FL-177 –COMPONENT SIDE–
1–652–745–11



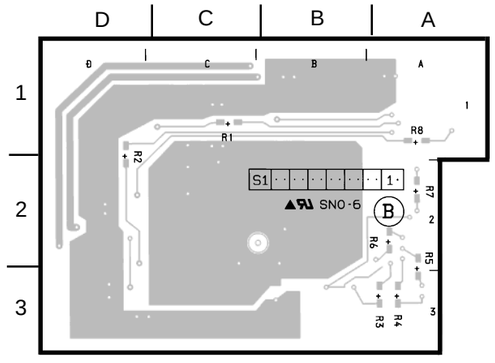
FL-177 –SOLDERING SIDE–
1–652–745–11

CN-1154 BOARD (1-656-061-11)

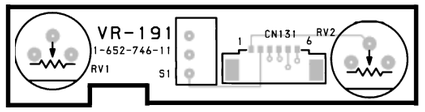
CN141	B-1
CN142	A-1
CN143	C-3
CN144	D-1
CN145	A-3
FL12	C-1
FL13	C-2
FL14	C-2
FL15	C-2
LOT NO.	B-1



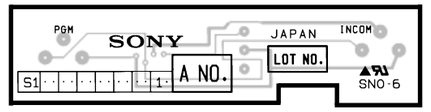
CN-1154 –COMPONENT SIDE–
1–656–061–11



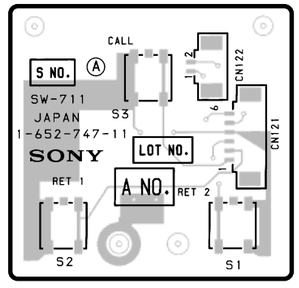
CN-1154 –SOLDERING SIDE–
1–656–061–11



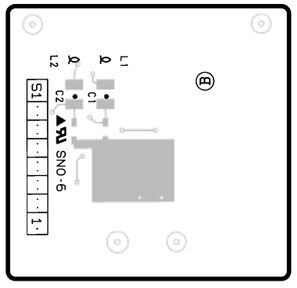
VR-191 –COMPONENT SIDE–
1–652–746–11



VR-191 –SOLDERING SIDE–
1–652–746–11



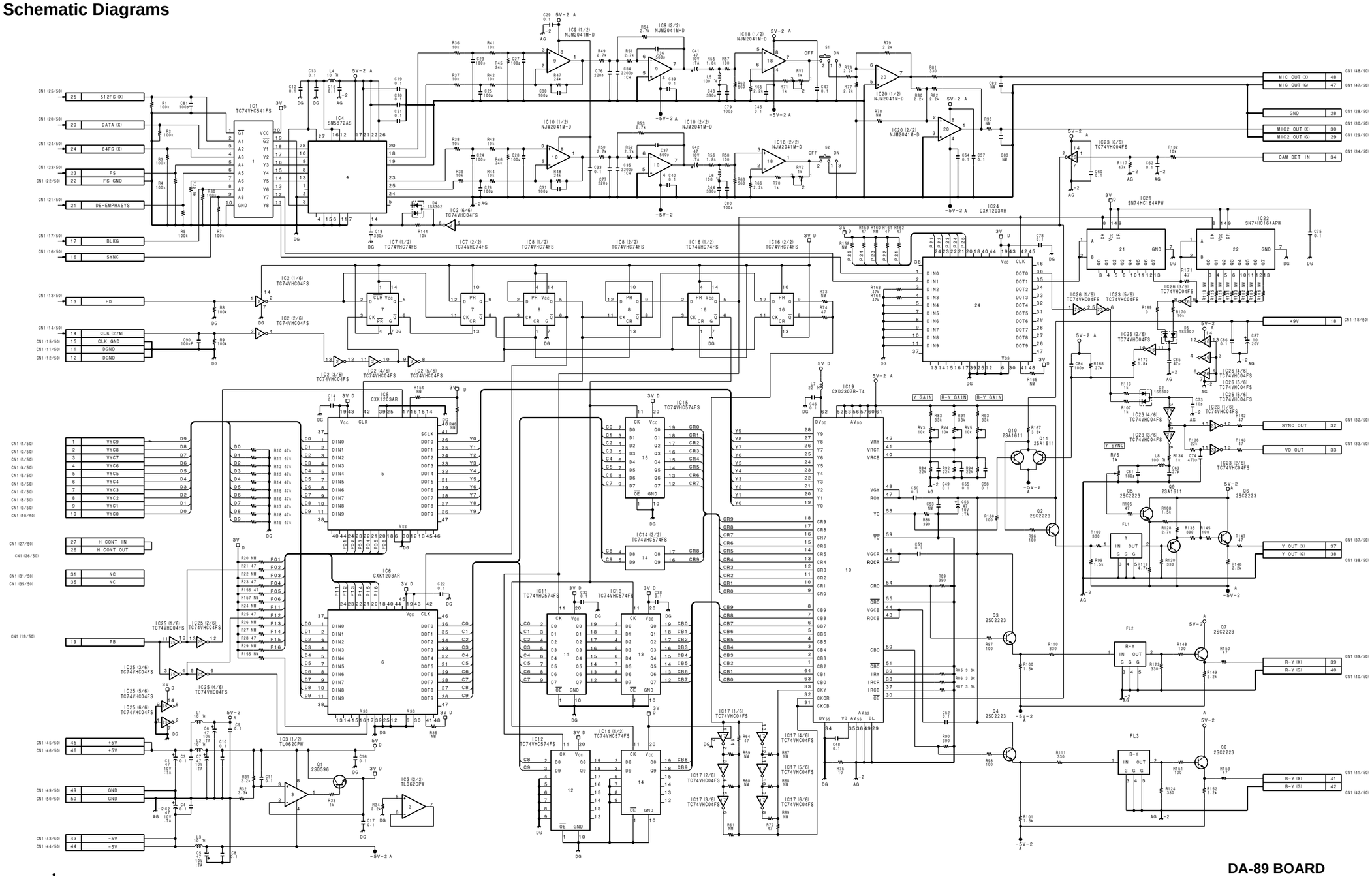
SW-711 –COMPONENT SIDE–
1–652–747–11



SW-711 –SOLDERING SIDE–
1–652–747–11

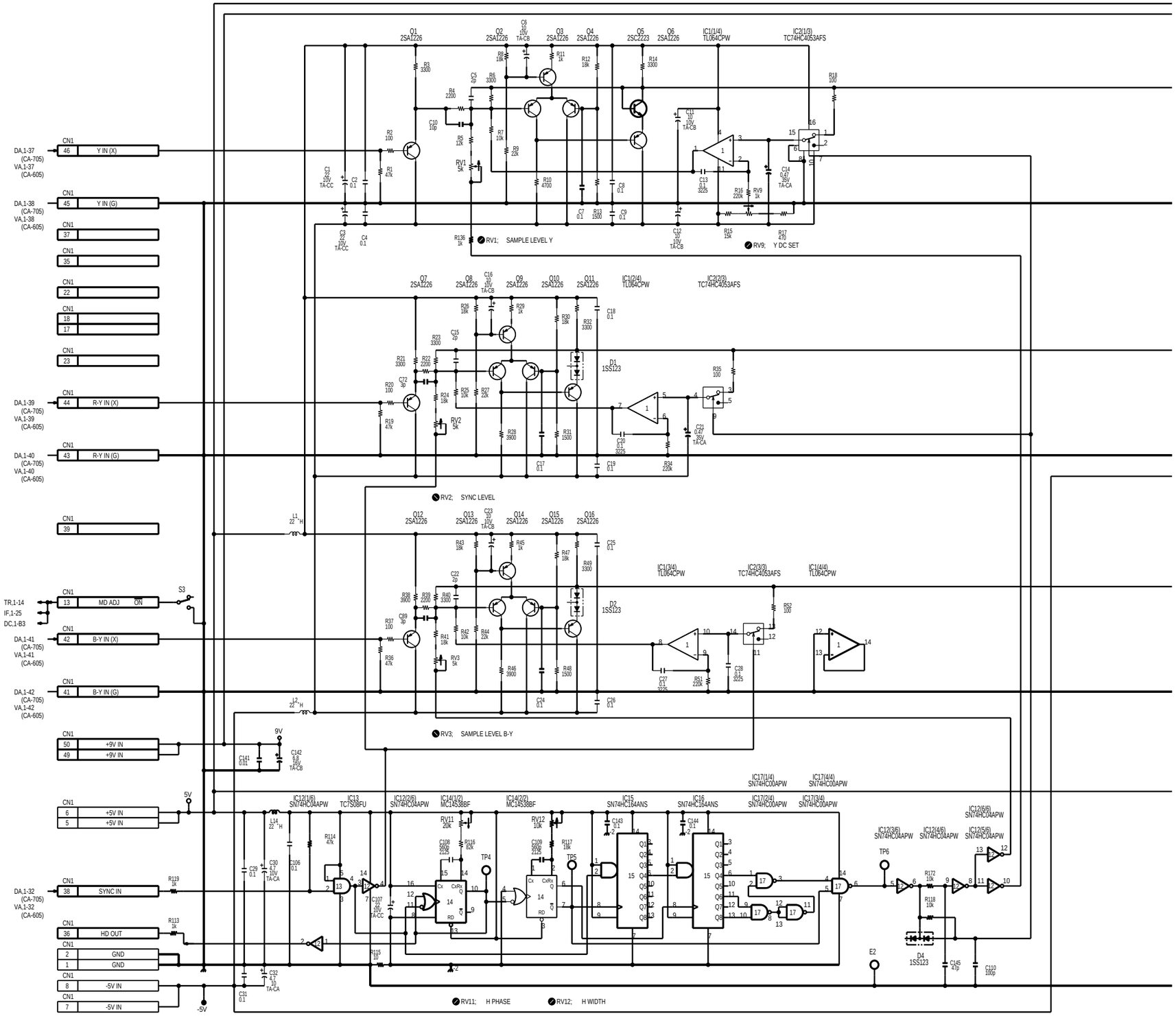
4-8

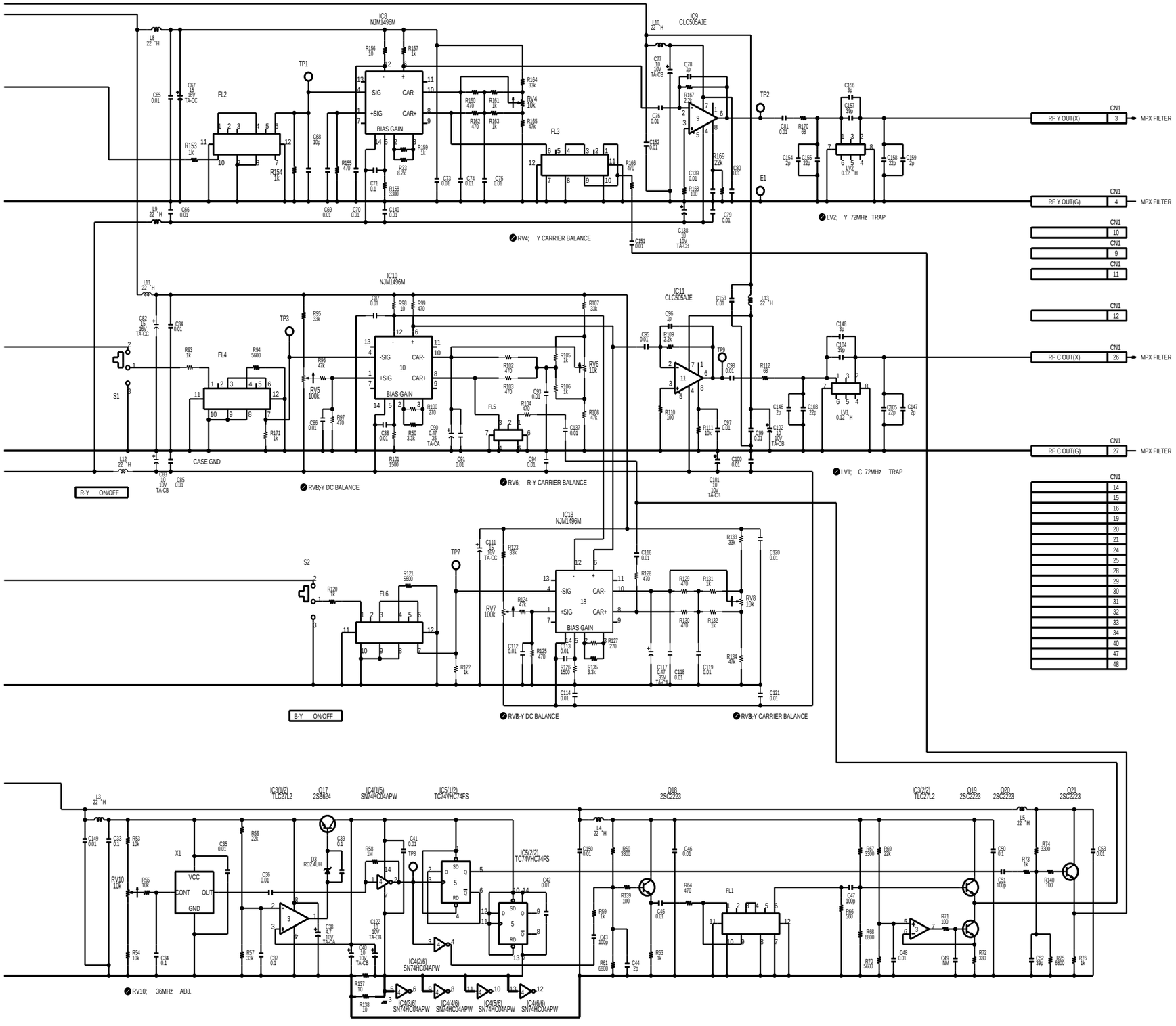
4-2. Schematic Diagrams



DA-89 BOARD

BOARD NO.1–656–060–11
CA-705
CA-705P

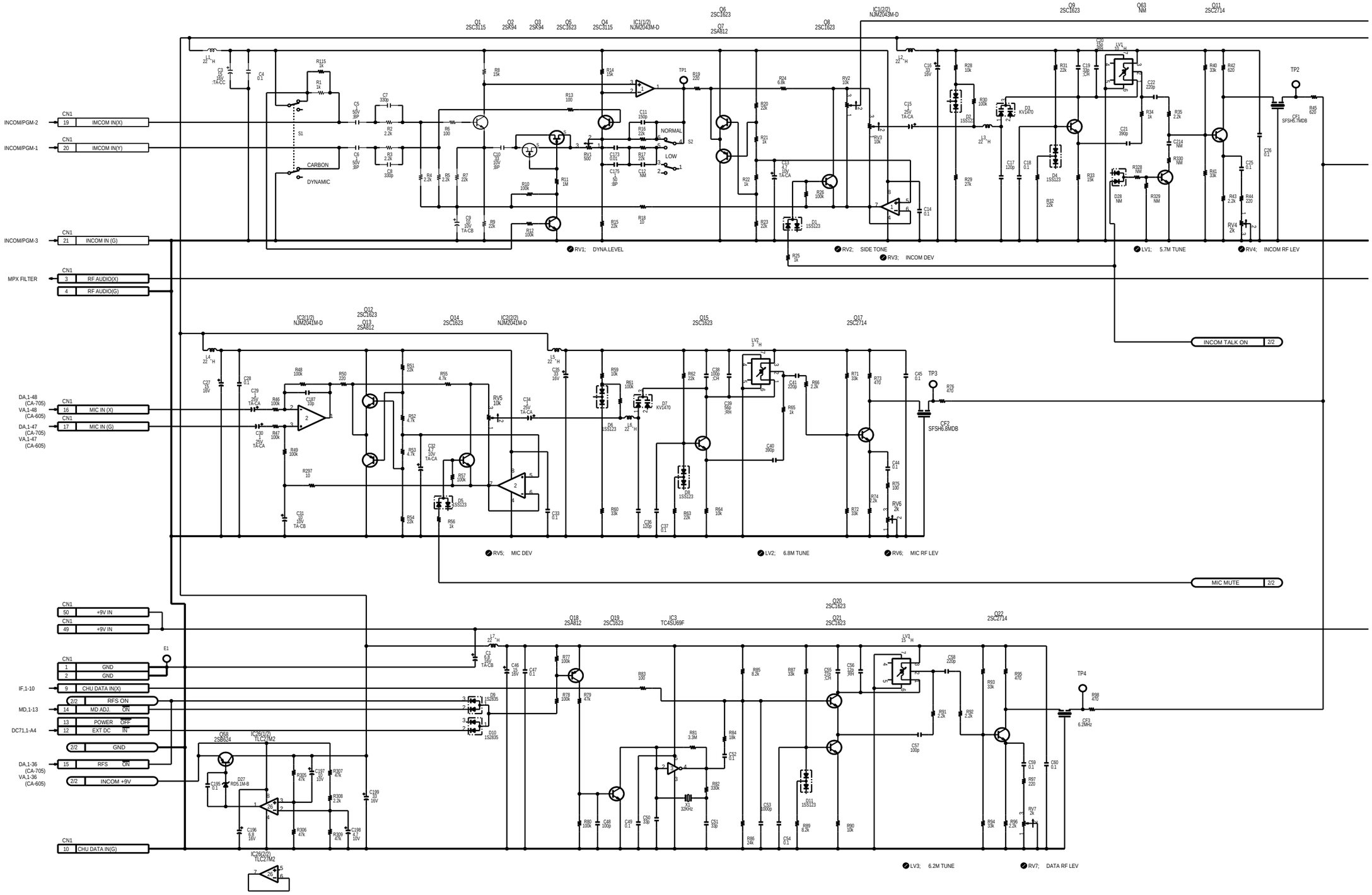

Q1 2SA1226
Q2 2SA1226
Q3 2SA1226
Q4 2SA1226
Q5 2SC2223
Q6 2SA1226
IC1(1/4) TL064CPW
IC2(1/3) TC74HC4053AFS
CN1 46 Y IN (X)
CN1 45 Y IN (G)
CN1 37
CN1 35
CN1 22
CN1 18
CN1 17
CN1 23
CN1 44 R-Y IN (X)
CN1 43 R-Y IN (G)
CN1 39
CN1 13 MD ADJ ON
CN1 42 B-Y IN (X)
CN1 41 B-Y IN (G)
CN1 50 +9V IN
CN1 49 +9V IN
CN1 6 +5V IN
CN1 5 +5V IN
CN1 38 SYNC IN
CN1 36 HD OUT
CN1 2 GND
CN1 1 GND
CN1 8 -5V IN
CN1 7 -5V IN
DA,1-37 (CA-705) VA,1-37 (CA-605)
DA,1-38 (CA-705) VA,1-38 (CA-605)
DA,1-39 (CA-705) VA,1-39 (CA-605)
DA,1-40 (CA-705) VA,1-40 (CA-605)
DA,1-41 (CA-705) VA,1-41 (CA-605)
DA,1-42 (CA-705) VA,1-42 (CA-605)
DA,1-32 (CA-705) VA,1-32 (CA-605)
TR,1-14
IF,1-25
DC,1-B3
RV1; SAMPLE LEVEL Y
RV9; Y DC SET
RV2; SYNC LEVEL
RV3; SAMPLE LEVEL B-Y
RV11; H PHASE
RV12; H WIDTH
Q7 2SA1226
Q8 2SA1226
Q9 2SA1226
Q10 2SA1226
Q11 2SA1226
IC1(2/4) TL064CPW
IC2(2/3) TC74HC4053AFS
D1 1SS123
Q12 2SA1226
Q13 2SA1226
Q14 2SA1226
Q15 2SA1226
Q16 2SA1226
IC1(3/4) TL064CPW
IC2(3/3) TC74HC4053AFS
IC1(4/4) TL064CPW
D2 1SS123
IC12(1/6) SN74HC04APW
IC13 TC7S08FU
IC12(2/6) SN74HC04APW
IC14(1/2) MC14538BF
IC14(2/2) MC14538BF
IC15 SN74HC164ANS
IC16 SN74HC164ANS
IC17(1/4) SN74HC00APW
IC17(2/4) SN74HC00APW
IC17(3/4) SN74HC00APW
IC17(4/4) SN74HC00APW
IC12(3/6) SN74HC04APW
IC12(4/6) SN74HC04APW
IC12(5/6) SN74HC04APW
IC12(6/6) SN74HC04APW
D4 1SS123
S3
9V
5V
-5V
TP4
TP5
TP6
E2



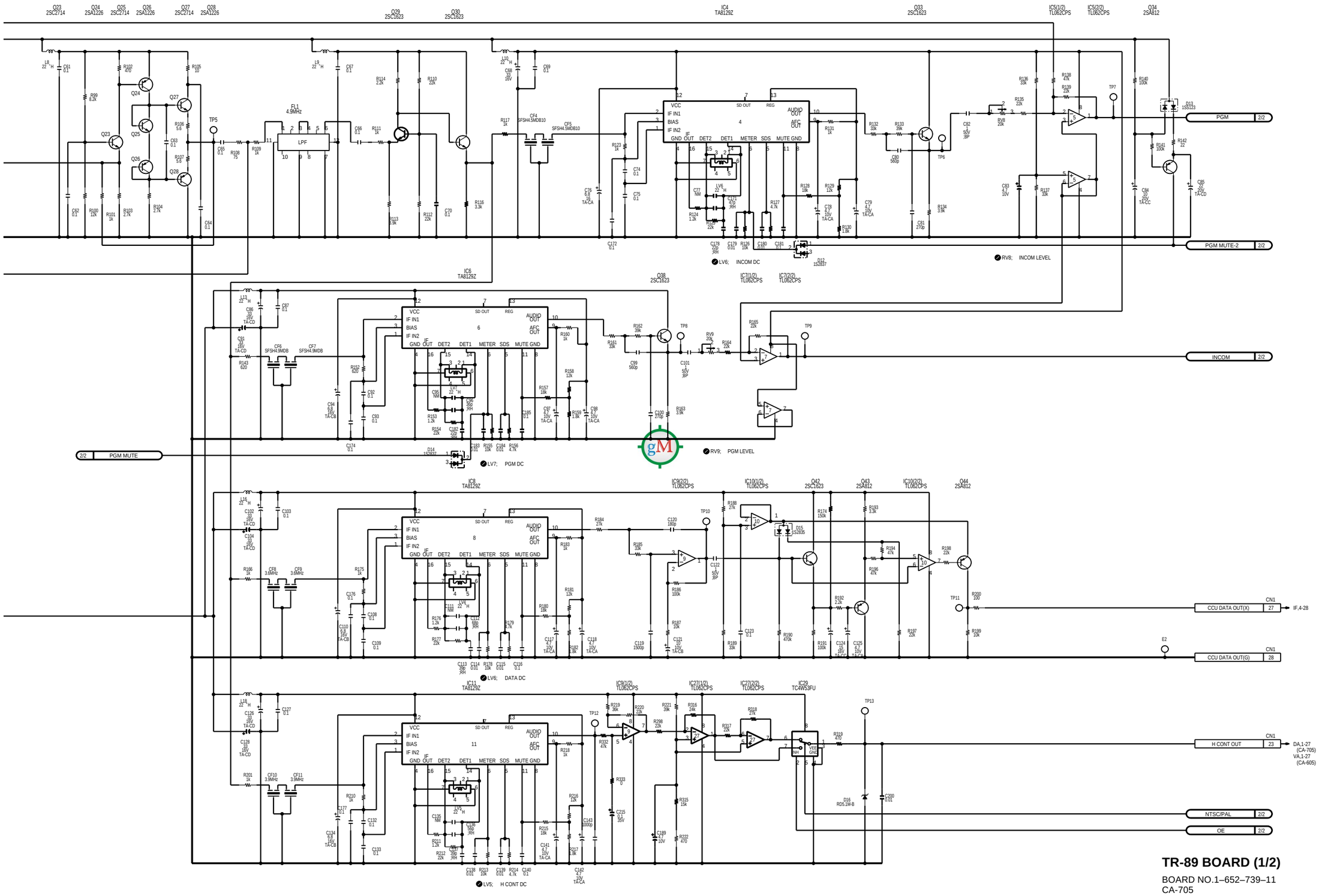
MD-102 BOARD

BOARD NO.1–652–737–11
CA-705
CA-705P

TR-89 (1/2) TR-89 (1/2)

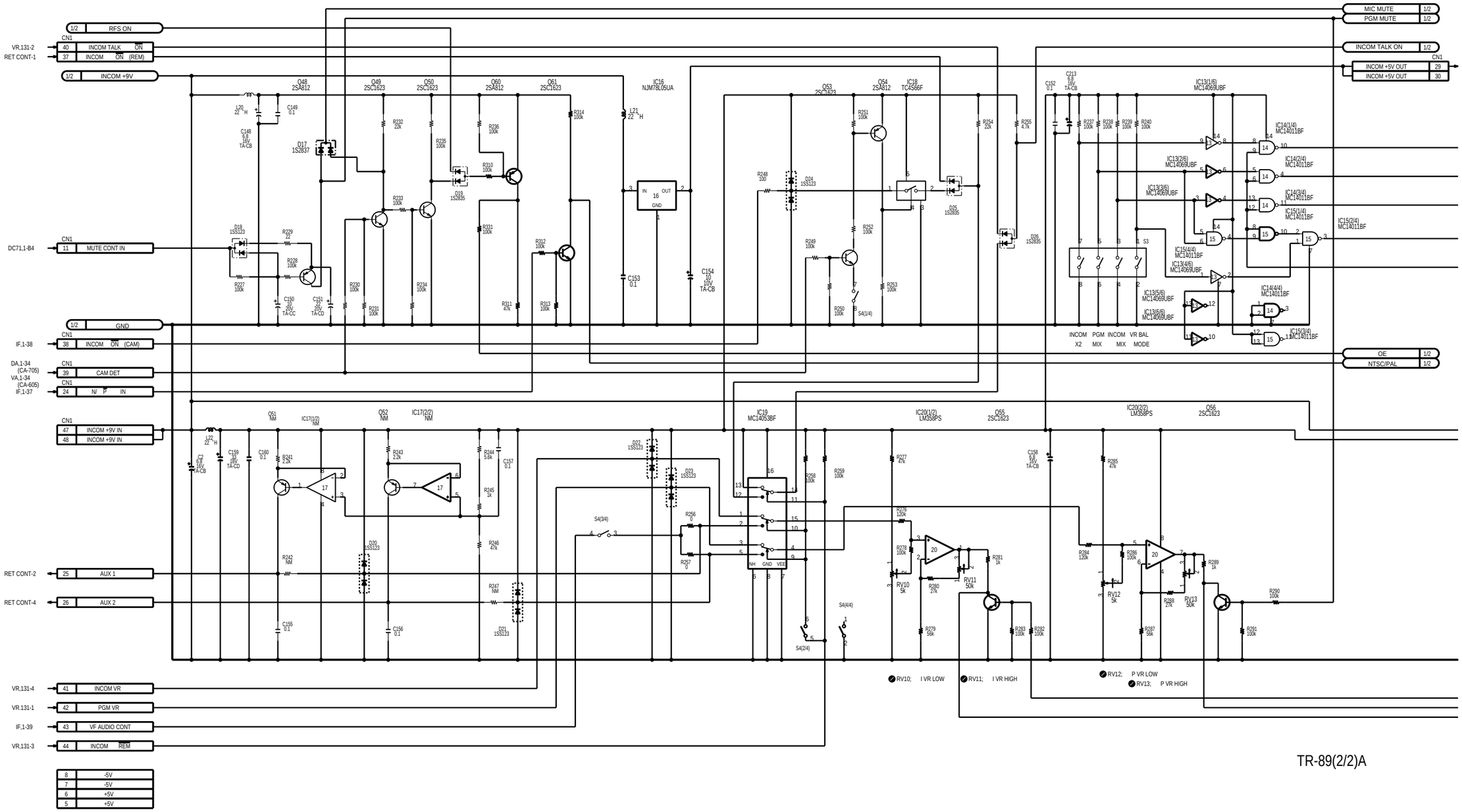


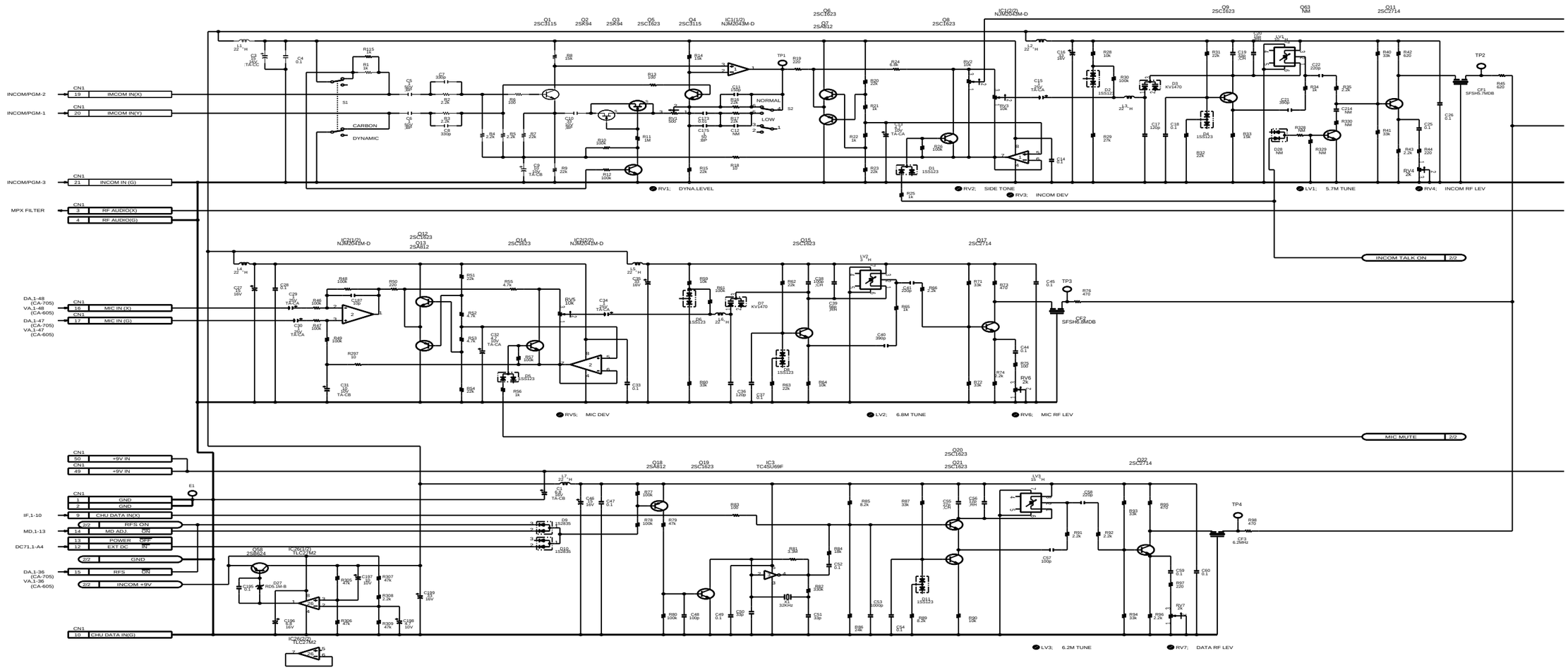
TR-89 (1/2)　TR-89 (1/2)



TR-89 BOARD (1/2)

BOARD NO.1–652–739–11
CA-705
CA-705P

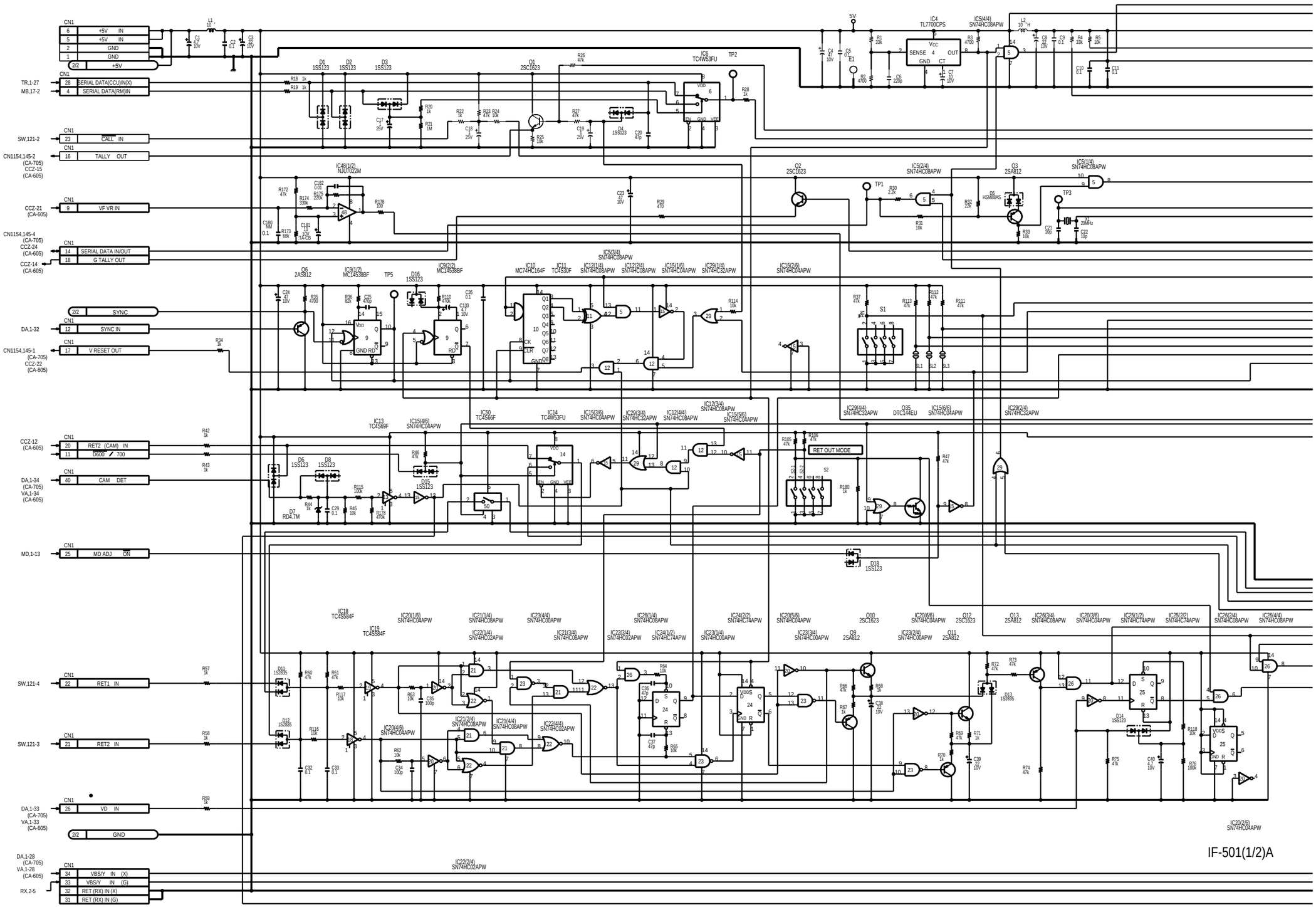

1/2 RFS ON
CN1
40 INCOM TALK ON
37 INCOM ON (REM)
1/2 INCOM +9V
CN1
11 MUTE CONT IN
1/2 GND
CN1
38 INCOM ON (CAM)
CN1
39 CAM DET
CN1
24 N/ P IN
CN1
47 INCOM +9V IN
48 INCOM +9V IN
CN1
25 AUX 1
26 AUX 2
CN1
41 INCOM VR
42 PGM VR
43 VF AUDIO CONT
44 INCOM REM
8 -5V
7 -5V
6 +5V
5 +5V
VR,131-2
RET CONT-1
DC71,1-B4
IF,1-38
DA,1-34 (CA-705)
VA,1-34 (CA-605)
IF,1-37
RET CONT-2
RET CONT-4
VR,131-4
VR,131-1
IF,1-39
VR,131-3
MIC MUTE 1/2
PGM MUTE 1/2
INCOM TALK ON 1/2
CN1
INCOM +5V OUT 29
INCOM +5V OUT 30
OE 1/2
NTSC/PAL 1/2
Q48 2SA812
Q49 2SC1623
Q50 2SC1623
Q60 2SA812
Q61 2SC1623
IC16 NJM78L05UA
Q53 2SC1623
Q54 2SA812
IC18 TC4S66F
IC13(1/6) MC14069UBF
IC14(1/4) MC14011BF
IC14(2/4) MC14011BF
IC13(2/6) MC14069UBF
IC13(3/6) MC14069UBF
IC14(3/4) MC14011BF
IC15(1/4) MC14011BF
IC15(2/4) MC14011BF
IC15(4/4) MC14011BF
IC13(4/6) MC14069UBF
IC13(5/6) MC14069UBF
IC14(4/4) MC14011BF
IC13(6/6) MC14069UBF
IC15(3/4) MC14011BF
INCOM X2
PGM MIX
INCOM MIX
VR BAL MODE
Q51 NM
IC17(1/2) NM
Q52 NM
IC17(2/2) NM
IC19 MC14053BF
IC20(1/2) LM358PS
Q55 2SC1623
IC20(2/2) LM358PS
Q56 2SC1623
S4(1/4)
S4(2/4)
S4(3/4)
S4(4/4)
RV10; I VR LOW
RV11; I VR HIGH
RV12; P VR LOW
RV13; P VR HIGH
TR-89(2/2)A



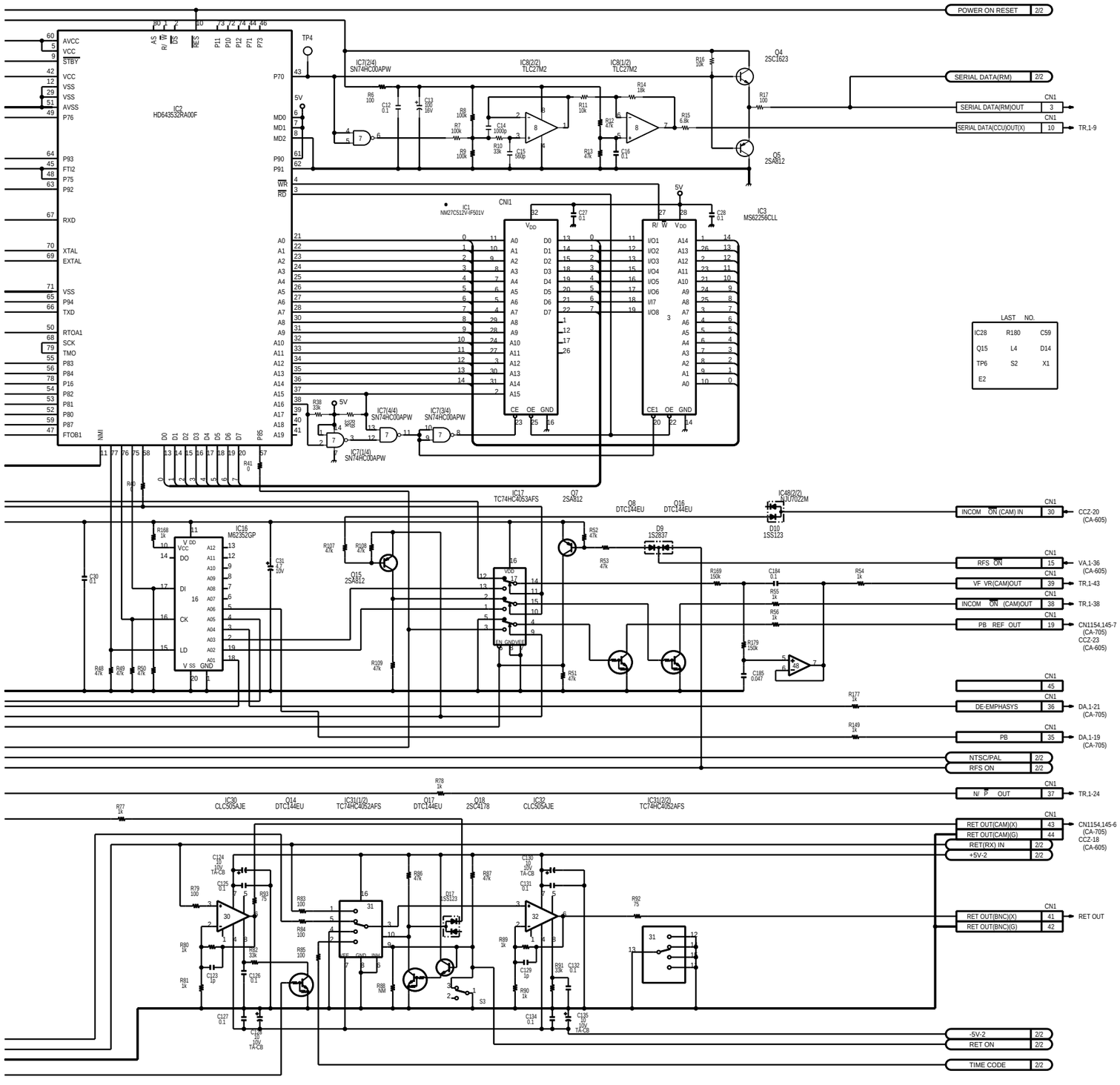
TR-89 BOARD (2/2)

BOARD NO.1–652–739–11
CA-705
CA-705P

IF-501 (1/2)　IF-501 (1/2)



IF-501(1/2)A



LAST NO.		
IC28	R180	C59
Q15	L4	D14
TP6	S2	X1
E2		

IF-501 BOARD (1/2)

BOARD NO.1–652–738–11
CA-705
CA-705P

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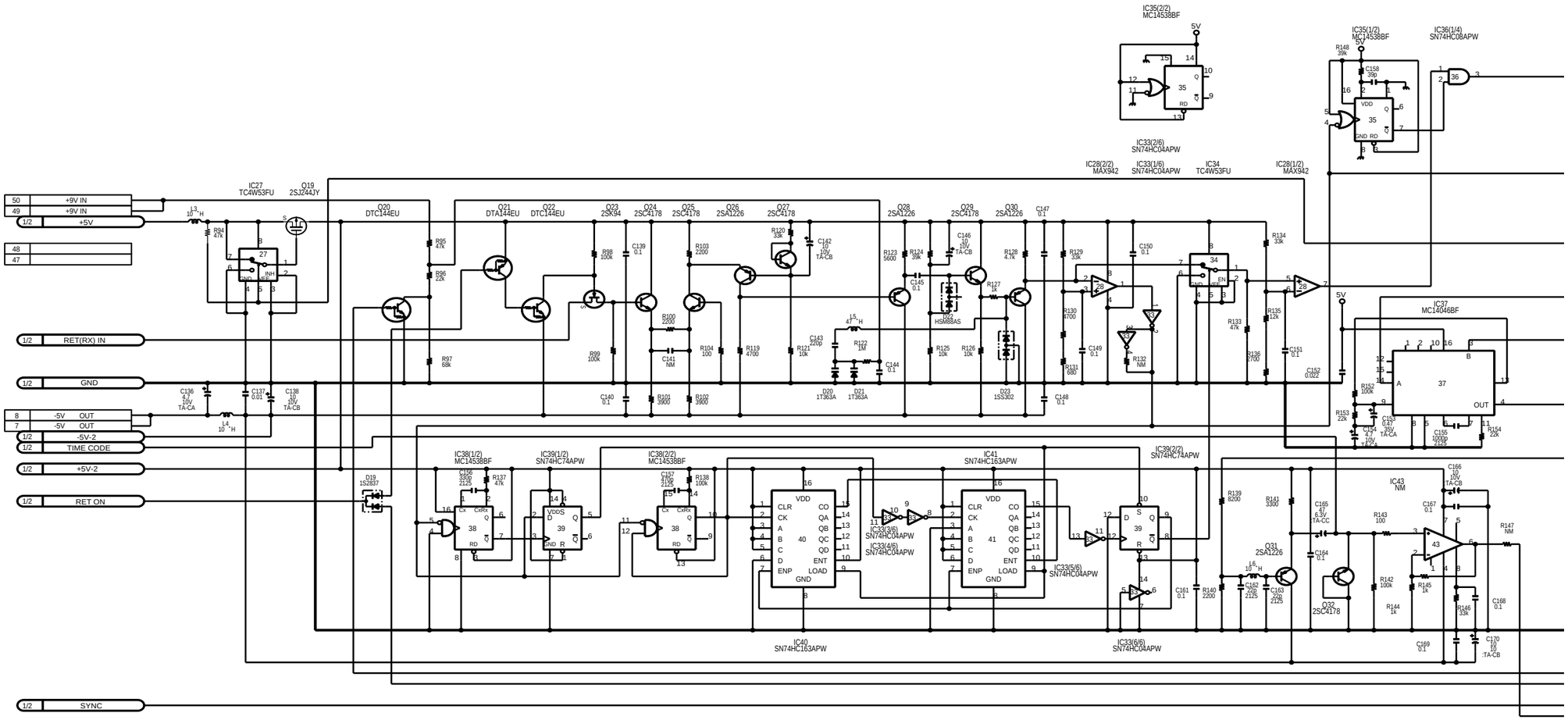
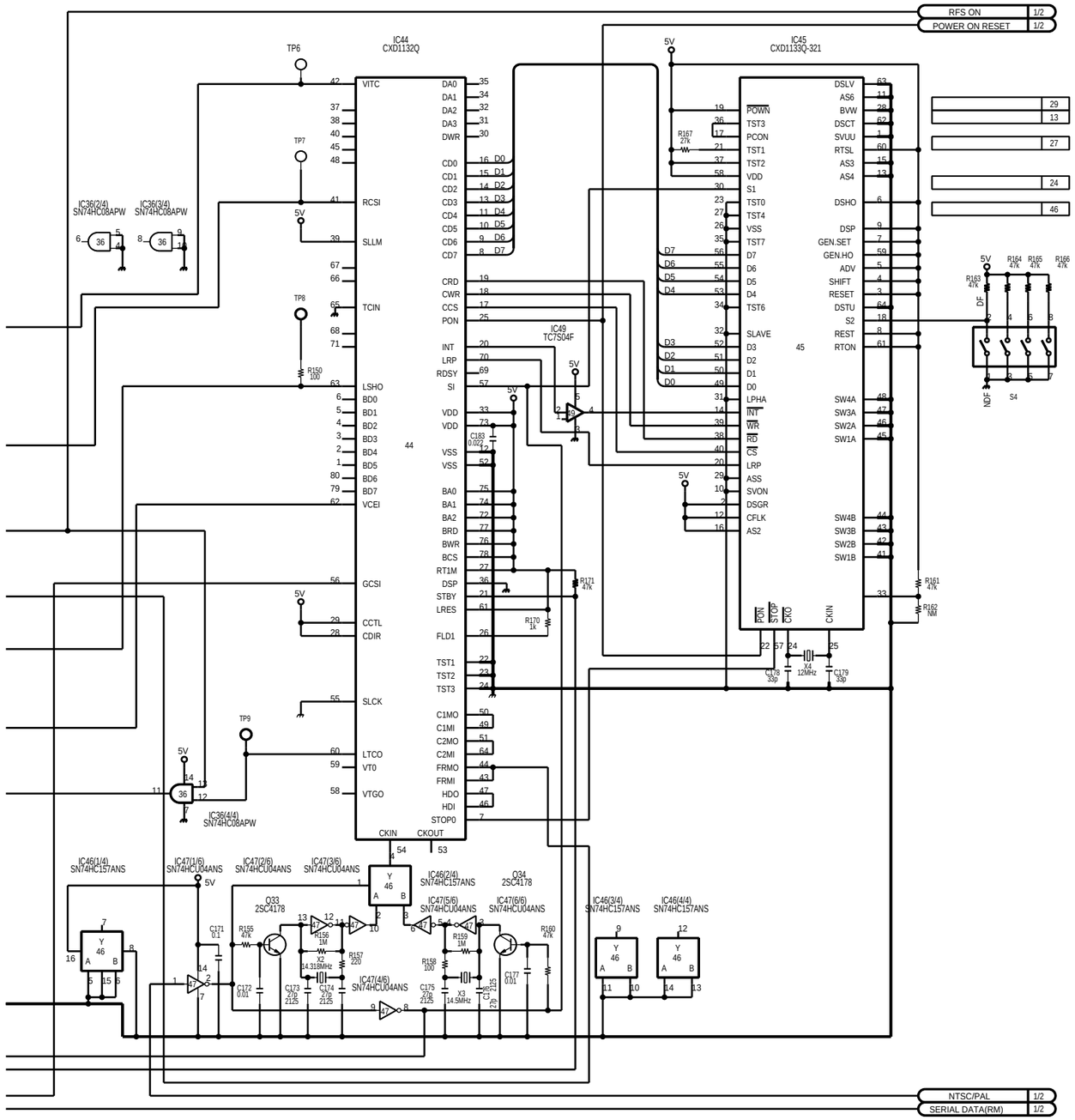


IF-501 2/2A

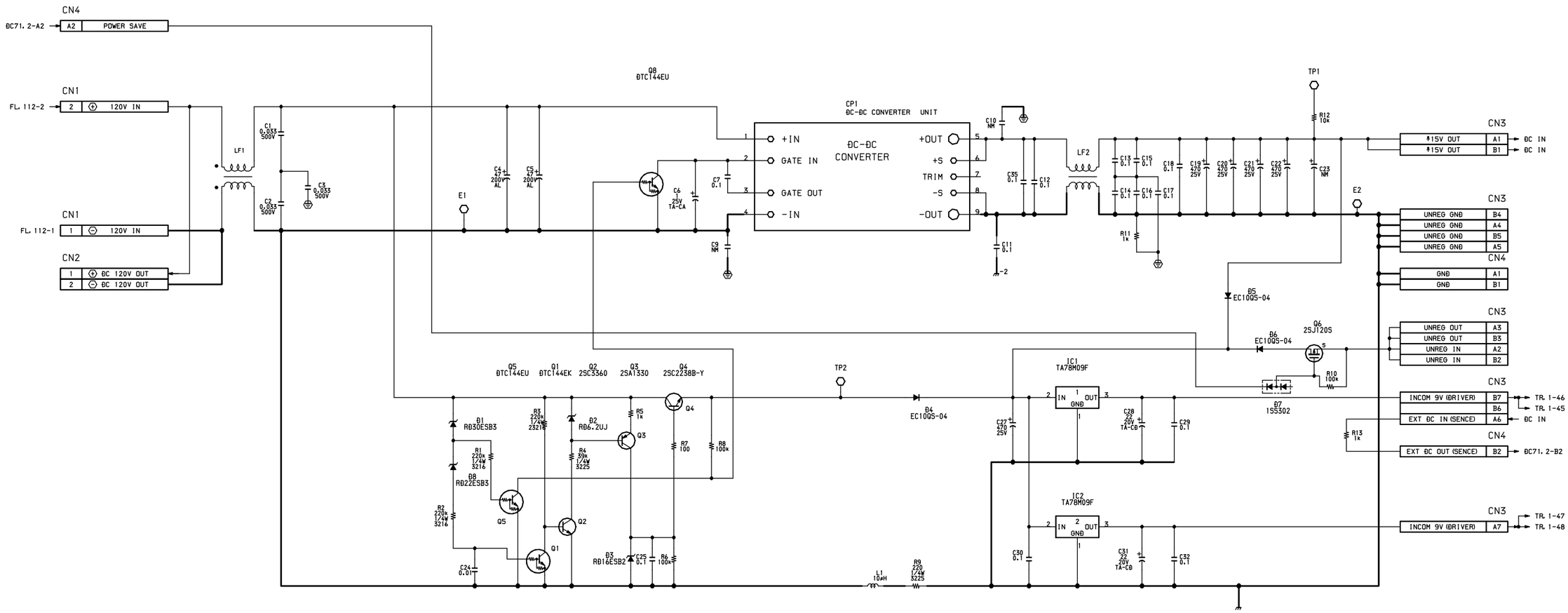
B-CA705-IF501-11

1-652-738-11
(0-822-094-02)



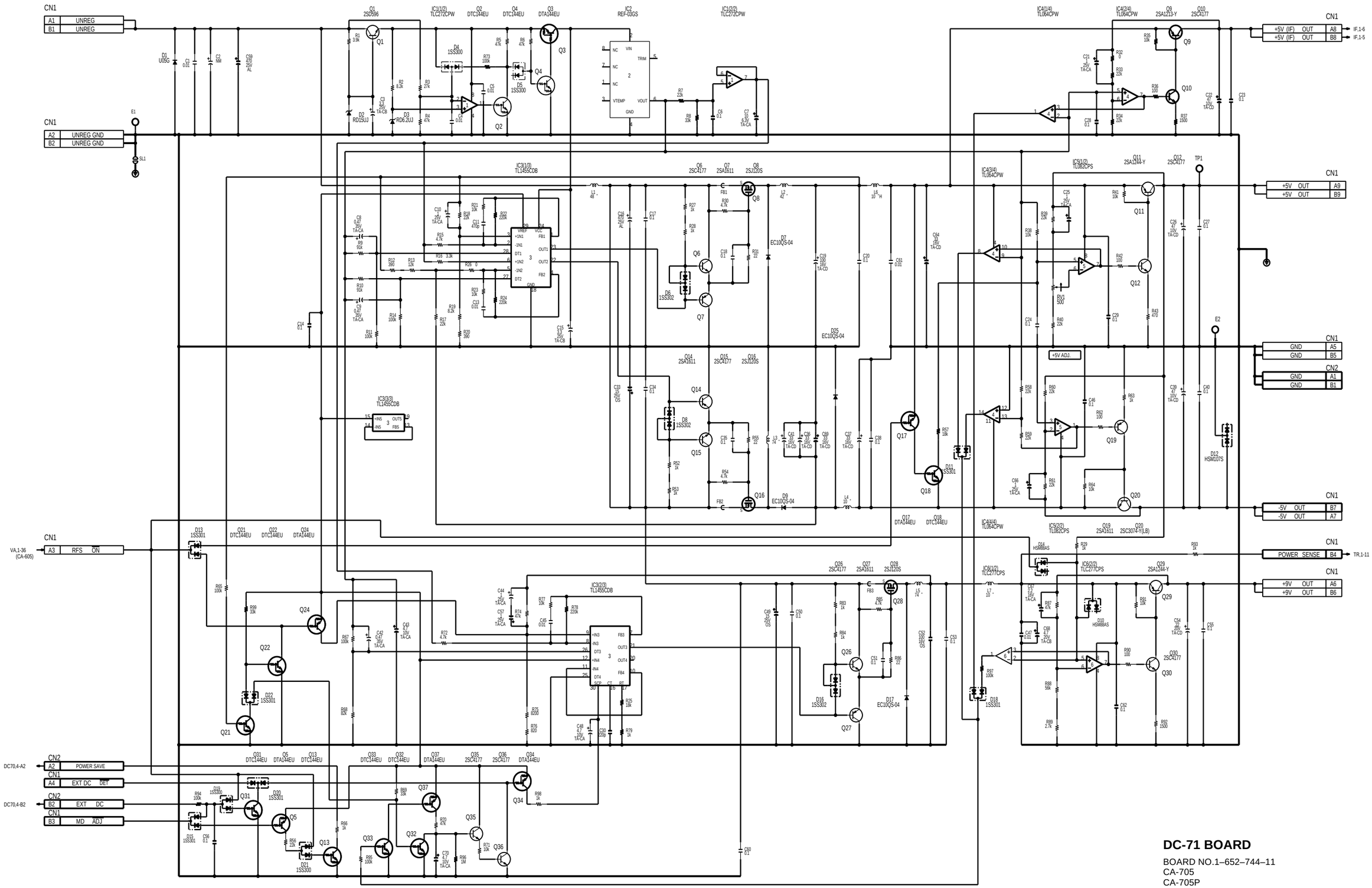
IF-501 BOARD (2/2)

BOARD NO.1–652–738–11
CA-705
CA-705P



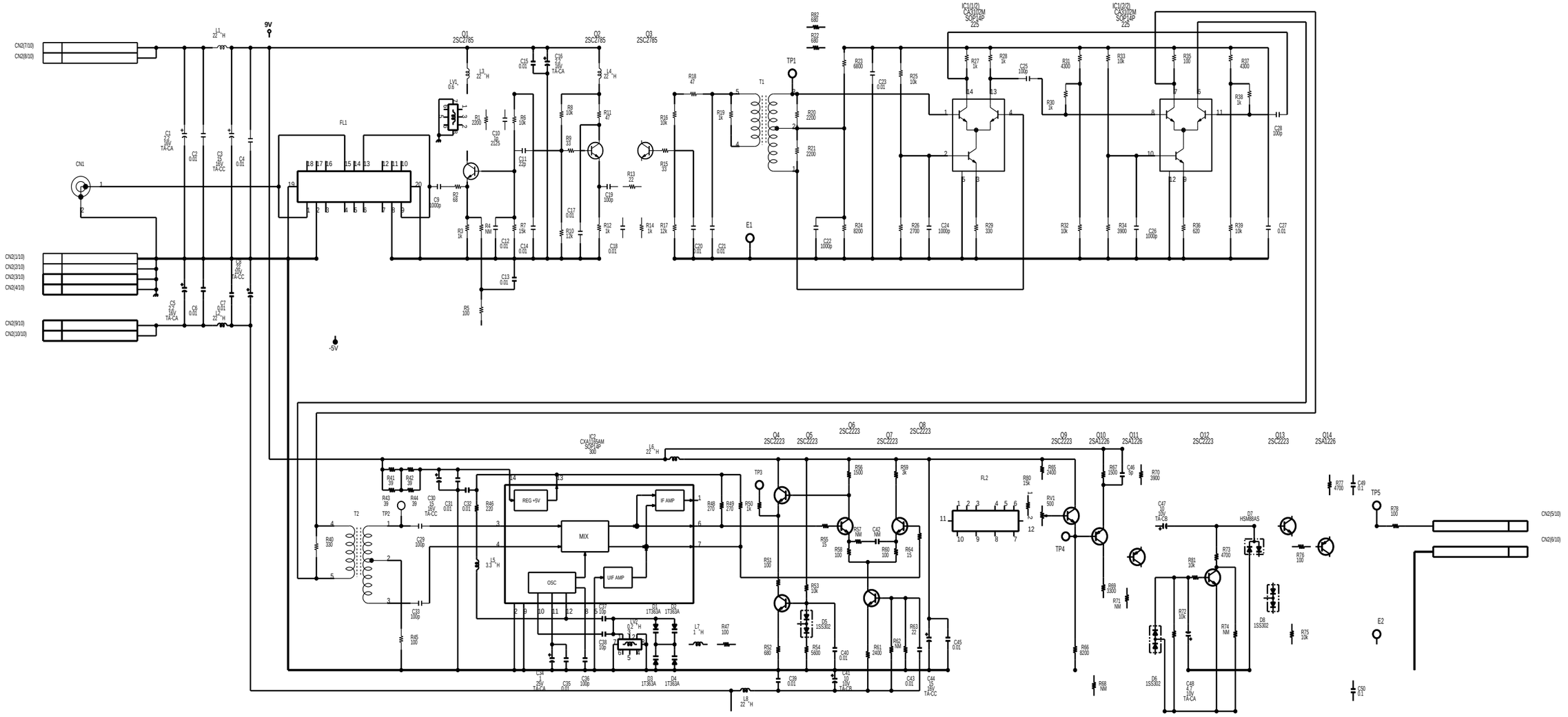
DC-70 BOARD

BOARD NO.1–652–743–11
CA-705
CA-705P



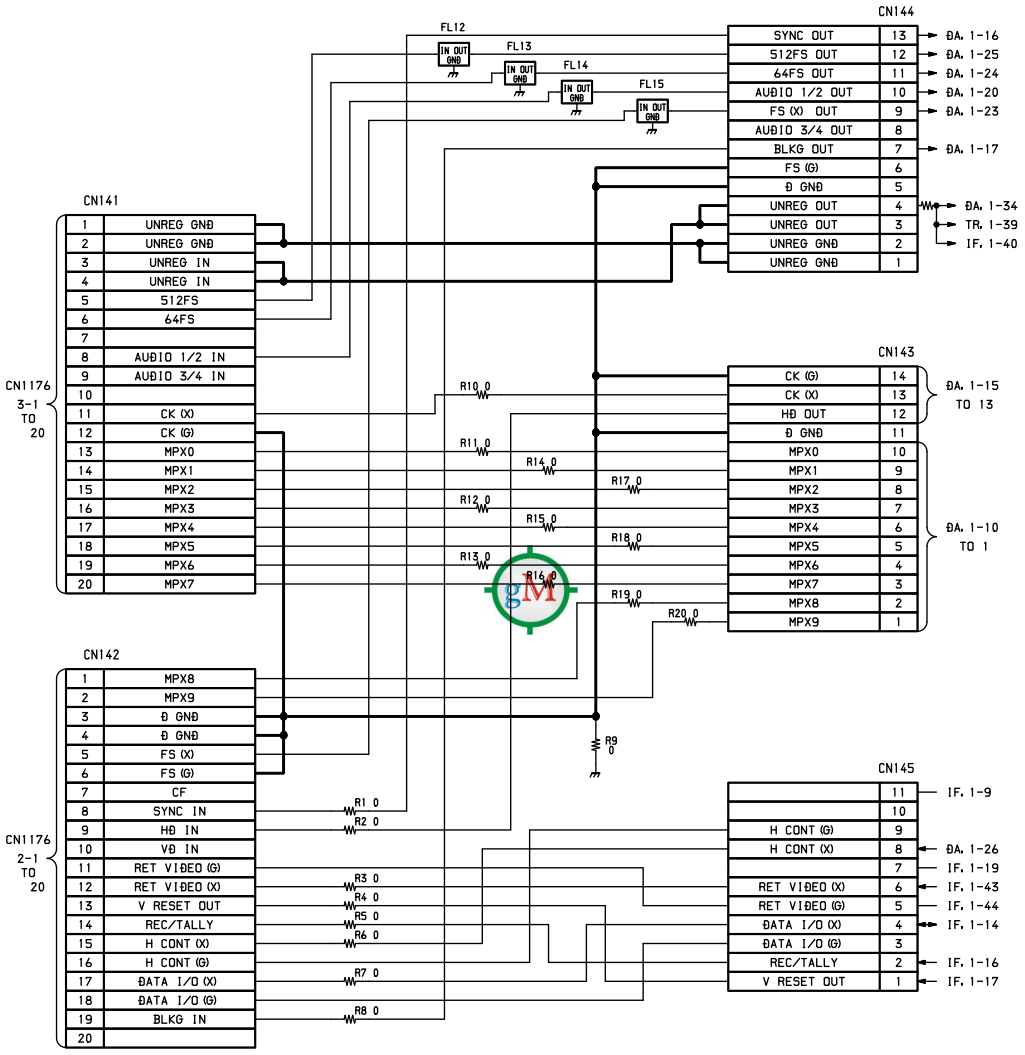
DC-71 BOARD

BOARD NO.1–652–744–11
CA-705
CA-705P



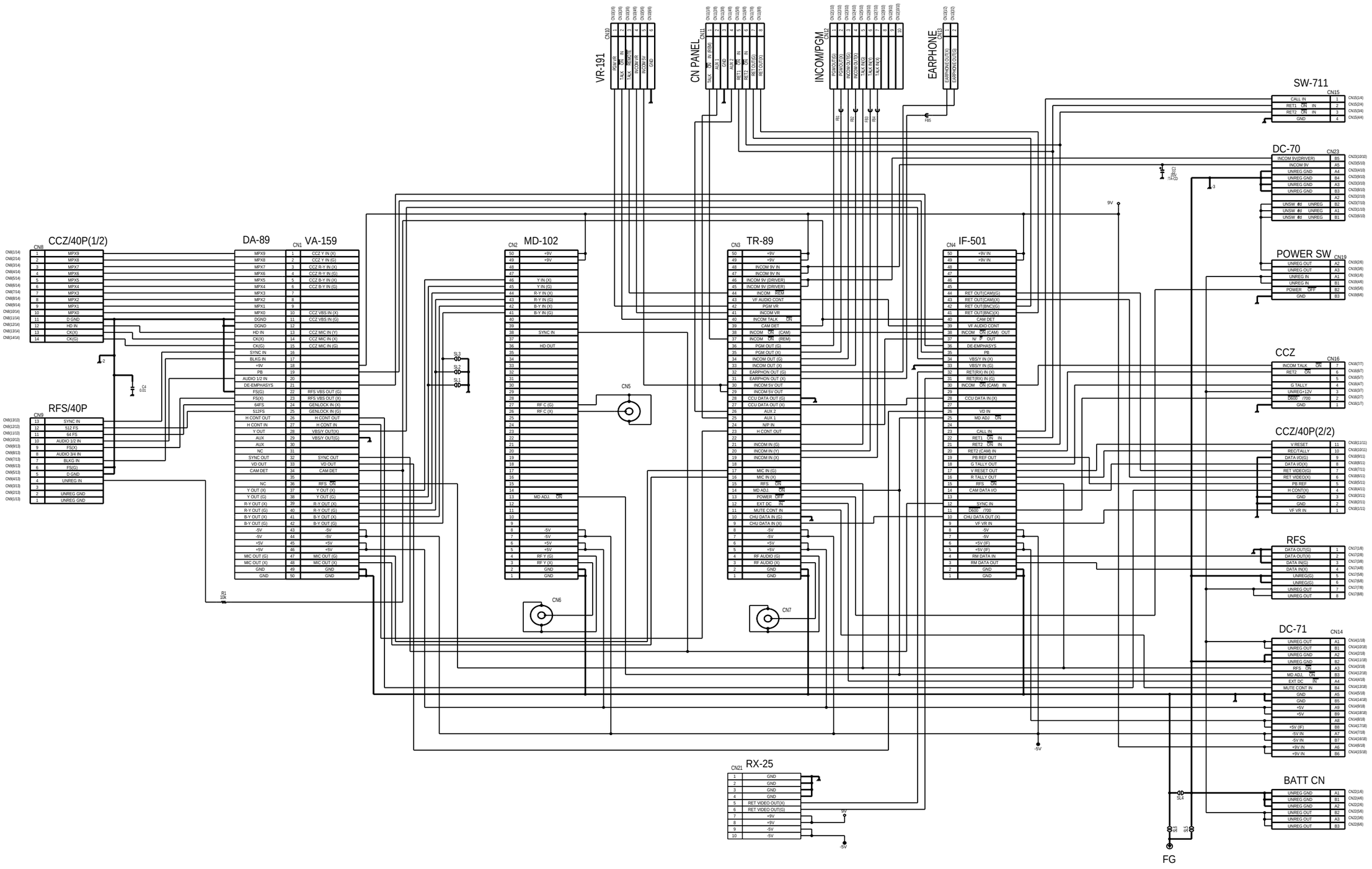
RX-25 BOARD

BOARD NO.1–652–741–11
CA-705
CA-705P



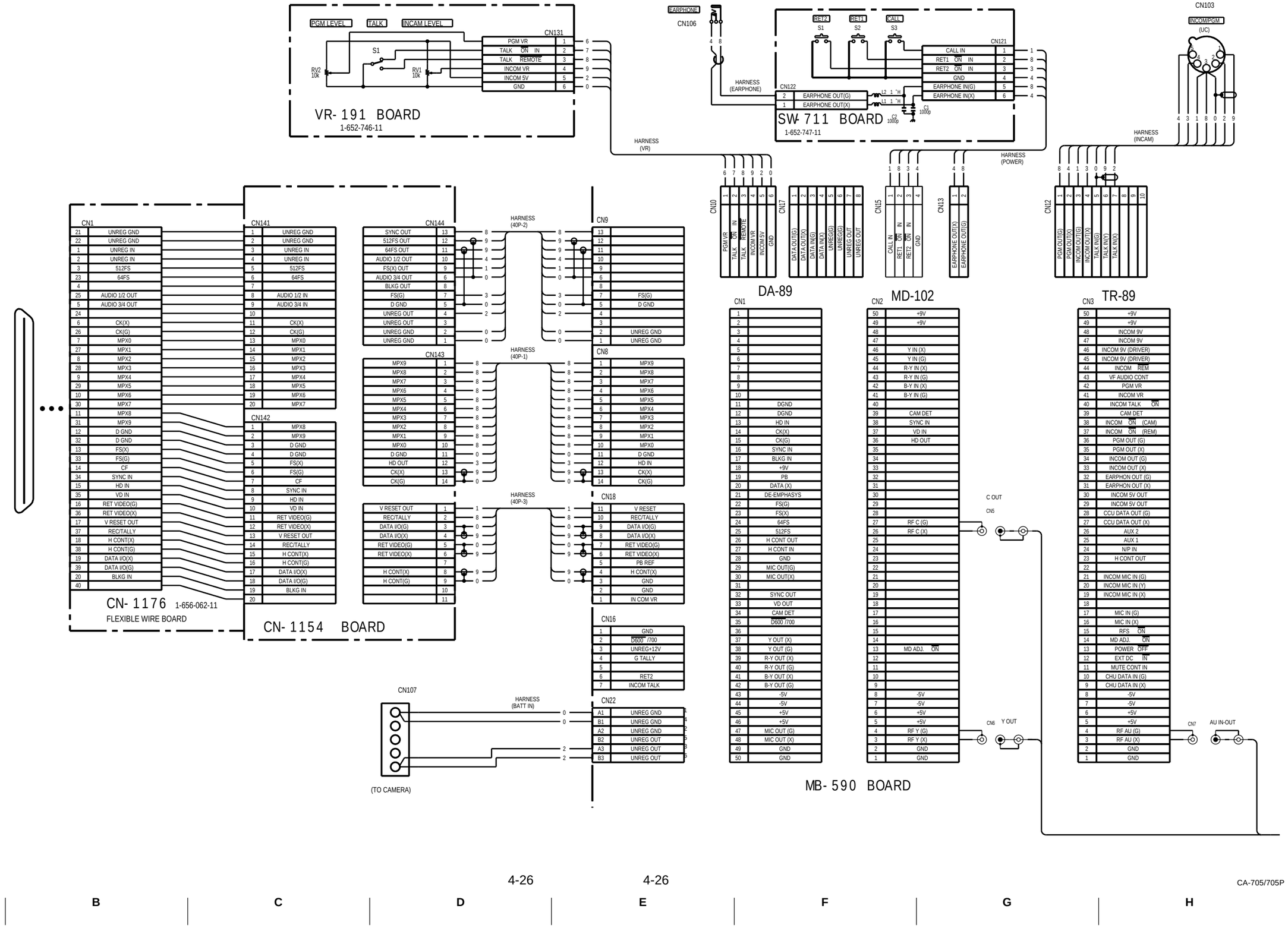
CN-1154 BOARD

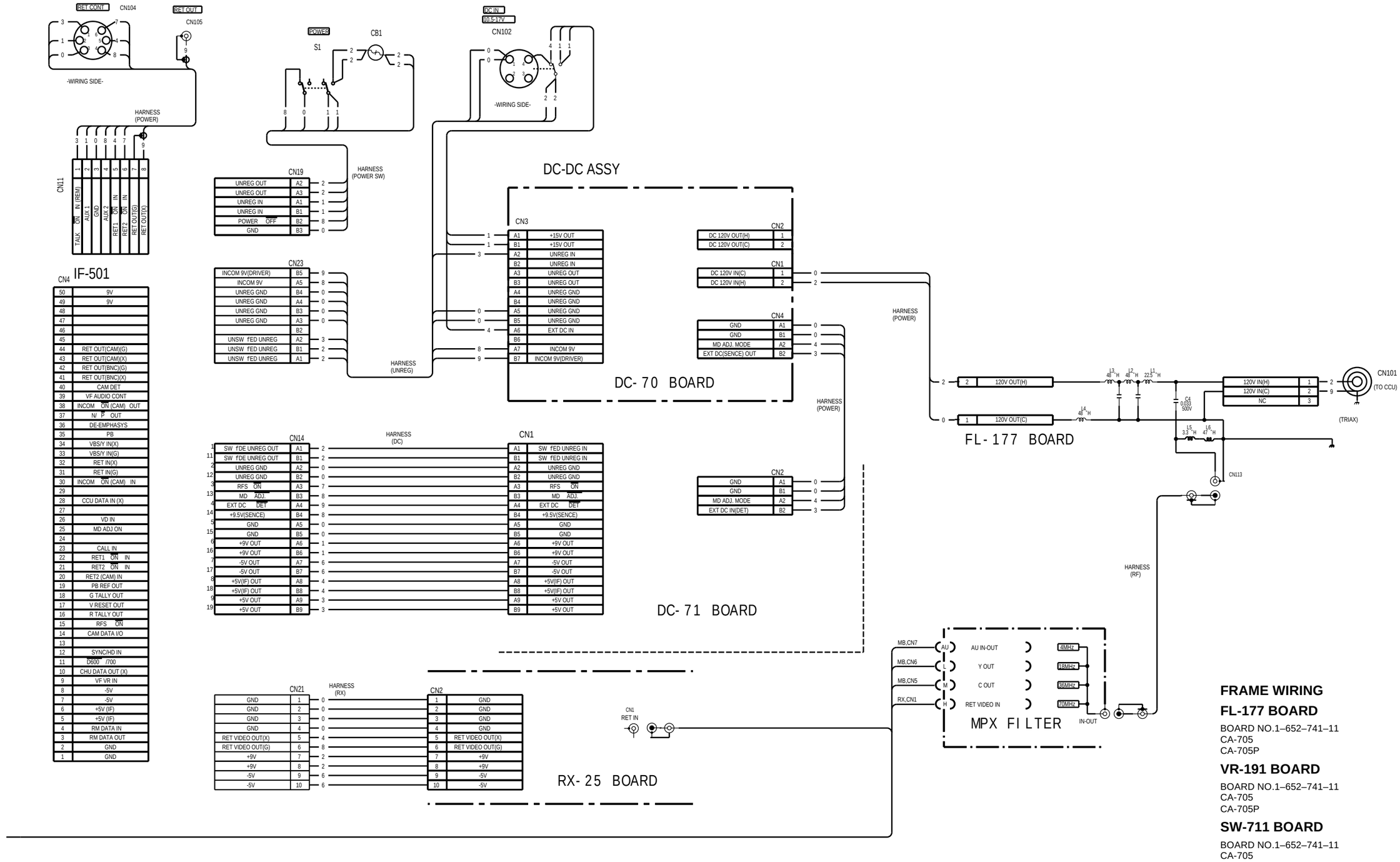
BOARD NO.1–656–061–11
CA-705
CA-705P



MB-590 BOARD

BOARD NO.1–652–742–11
CA-705
CA-705P


PGM LEVEL
TALK
INCAM LEVEL
S1
RV2 10k
RV1 10k
CN131
PGM VR
TALK ON IN
TALK REMOTE
INCOM VR
INCOM 5V
GND
VR- 191 BOARD
1-652-746-11
HARNESS (VR)
EARPHONE
CN106
HARNESS (EARPHONE)
CN122
EARPHONE OUT(G)
EARPHONE OUT(X)
RET2
RET1
CALL
S1
S2
S3
CN121
CALL IN
RET1 ON IN
RET2 ON IN
GND
EARPHONE IN(G)
EARPHONE IN(X)
L2 1 µH
L1 1 µH
C1 1000p
C2 1000p
SW- 711 BOARD
1-652-747-11
HARNESS (POWER)
CN103
INCOM/PGM
(UC)
HARNESS (INCAM)
CN10
CN17
CN15
CN13
CN12
DA-89
MD-102
TR-89
CN1
CN2
CN3
CN141
CN144
CN143
CN142
CN9
CN8
CN18
CN16
CN22
HARNESS (40P-2)
HARNESS (40P-1)
HARNESS (40P-3)
CN107
HARNESS (BATT IN)
(TO CAMERA)
CN- 1176 1-656-062-11
FLEXIBLE WIRE BOARD
CN- 1154 BOARD
C OUT
CN5
Y OUT
CN6
CN7
AU IN-OUT
MB- 590 BOARD


RET CONT
CN104
RET OUT
CN105
-WIRING SIDE-
HARNESS (POWER)
CN11
IF-501
CN4
POWER
S1
CB1
DC IN 10.5-17V
CN102
-WIRING SIDE-
CN19
HARNESS (POWER SW)
UNREG OUT
UNREG OUT
UNREG IN
UNREG IN
POWER OFF
GND
DC-DC ASSY
CN3
+15V OUT
+15V OUT
UNREG IN
UNREG IN
UNREG OUT
UNREG OUT
UNREG GND
UNREG GND
UNREG GND
UNREG GND
EXT DC IN
INCOM 9V
INCOM 9V(DRIVER)
CN2
DC 120V OUT(H)
DC 120V OUT(C)
CN1
DC 120V IN(C)
DC 120V IN(H)
CN4
GND
GND
MD ADJ. MODE
EXT DC(SENCE) OUT
CN23
INCOM 9V(DRIVER)
INCOM 9V
UNREG GND
UNREG GND
UNREG GND
UNREG GND
UNSW fED UNREG
UNSW fED UNREG
UNSW fED UNREG
HARNESS (UNREG)
DC-70 BOARD
HARNESS (POWER)
HARNESS (POWER)
120V OUT(H)
120V OUT(C)
FL-177 BOARD
120V IN(H)
120V IN(C)
NC
CN101
(TO CCU)
(TRIAX)
CN113
HARNESS (DC)
CN14
CN1
SW fDE UNREG OUT
SW fDE UNREG OUT
UNREG GND
UNREG GND
RFS ON
MD ADJ.
EXT DC DET
+9.5V(SENCE)
GND
GND
+9V OUT
+9V OUT
-5V OUT
-5V OUT
+5V(IF) OUT
+5V(IF) OUT
+5V OUT
+5V OUT
SW fED UNREG IN
SW fED UNREG IN
UNREG GND
UNREG GND
RFS ON
MD ADJ.
EXT DC DET
+9.5V(SENCE)
GND
GND
+9V OUT
+9V OUT
-5V OUT
-5V OUT
+5V(IF) OUT
+5V(IF) OUT
+5V OUT
+5V OUT
DC-71 BOARD
CN2
GND
GND
MD ADJ. MODE
EXT DC IN(DET)
HARNESS (RF)
MB,CN7
MB,CN6
MB,CN5
RX,CN1
AU
L
M
H
AU IN-OUT
Y OUT
C OUT
RET VIDEO IN
4MHz
18MHz
36MHz
70MHz
IN-OUT
MPX FILTER
CN1
RET IN
CN21
HARNESS (RX)
CN2
GND
GND
GND
GND
RET VIDEO OUT(X)
RET VIDEO OUT(G)
+9V
+9V
-5V
-5V
RX-25 BOARD

| | | |

Section 5
Semiconductor Pin Assignments

The chart in this section may sometimes show diodes, transistors, and ICs that are not interchangeable. When replacing a component, be sure to refer to the parts list. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

DIODE PAGE

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1SS300 ····· 5-2
1SS301 ····· 5-2
1SS302 ····· 5-2
IT363 ····· 5-2
IT363A ····· 5-2
EC10QS-04 ····· 5-2
KV1470 ····· 5-2
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RD??UH ····· 5-2
RD??UJN ····· 5-2
RD??M-B ····· 5-2
HSM107S ····· 5-2
HSM88AS ····· 5-2
MA141WK ····· 5-2
U05G ····· 5-2
UZM??B ····· 5-2

TRANSISTOR PAGE

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DTC144EK ····· 5-2
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DTC144EUA ····· 5-2

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MC74HC164F ····· 5-9
MS62256CLL-10FC ····· 5-10

NJM1496M ····· 5-10
NJM2041M-D ····· 5-10
NJM2043M-D ····· 5-10
NJM386M ····· 5-10
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NJM3414M ····· 5-10

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SM5872AS-ET ····· 5-11
SN74HC00APW ····· 5-11
SN74HC02APW ····· 5-11
SN74HC04APW ····· 5-11
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TL064CPW ····· 5-14
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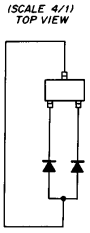
TLC277CPS ····· 5-14
TLC27L2CPS ····· 5-14
TLC27M2CPS ····· 5-14

http://getMANUAL.com

DIODE



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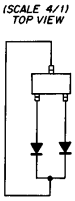
1SS300



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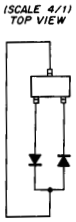
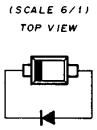
1SS184
1SS301
MA141WK



1SS123
1SS226
1SS302
HSM107S
HSM88AS



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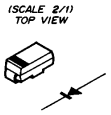
1T363A



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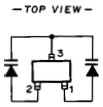

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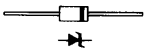
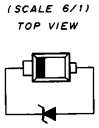
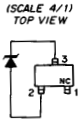


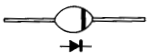
RD ? ?ESB ?



RD ? ?UH
RD ? ?UJN

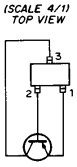


RD ? ?M-B
UZM ? ?B

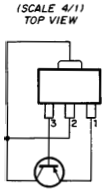


U05G

TRANSISTOR



2SA1162
2SA1162-G
2SA1226
2SA1330
2SA1611
2SA812
2SB624



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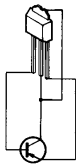

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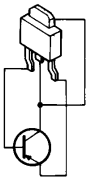

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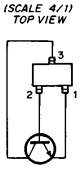
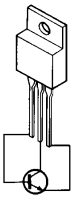


2SC1623
2SC1623-L6
2SC2223
2SC2714-Y
2SC2758
2SC3115
2SC3360
2SC4177-L6
2SC4178
2SD596
2SD596DV



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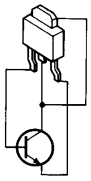
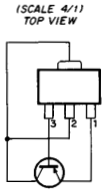


2SC3074LB



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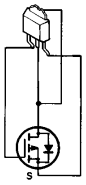

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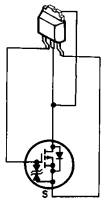

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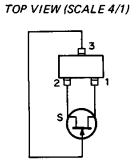
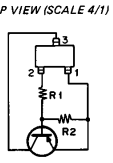
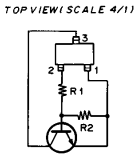


2SK94
2SK94-X4



DTA144EU (R1=47K, R2=47K)

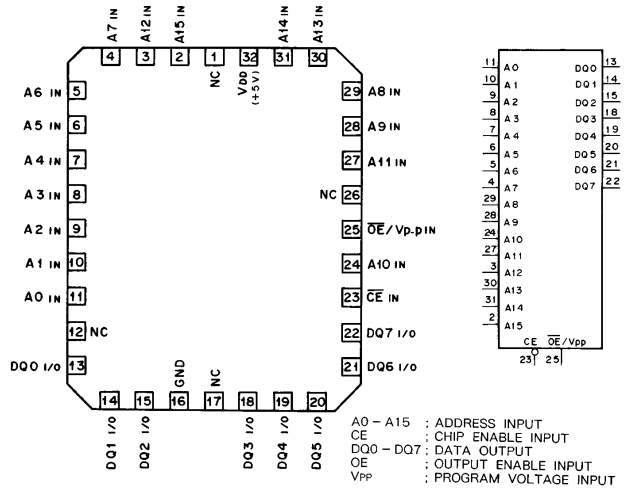


DTC144EK (R1=47K, R2=47K)
DTC144EU (R1=47K, R2=47K)
DTC144EUA (R1=47K, R2=47K)

IC

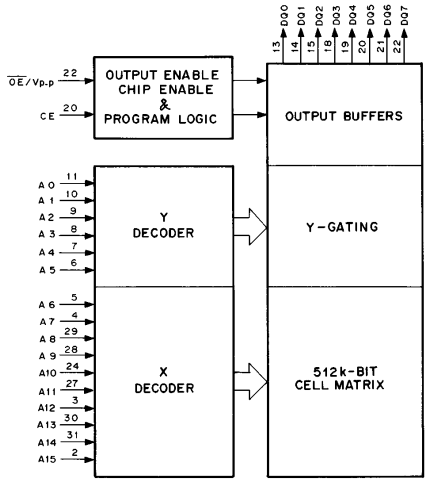
AM27C512-150LI (AMD)
NM27C512V150 (NS)

C-MOS 512K (65,536X8)-BIT UV EPROM
– TOP VIEW –



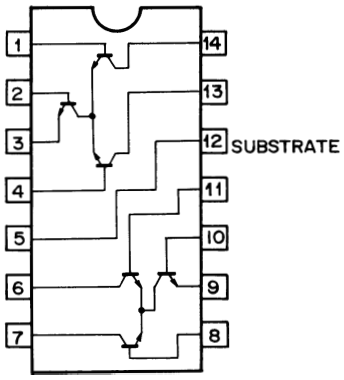
An	CE	OE/VPP	VDD	Dn	FUNCTION
AIN	0	0	+5V	DOUT	READ
AIN	0	1	+5V	HI-Z	OUTPUT DISABLE
×	1	×	+5V	HI-Z	STANDBY
AIN	0	+12.5V	+6V	DIN	PGM
AIN	0	0	+6V	DOUT	PGM VERIFY
×	1	+12.5V	+6V	HI-Z	PGM INH

0 : LOW LEVEL
1 : HIGH LEVEL
×: DON'T CARE
HI-Z: HIGH IMPEDANCE



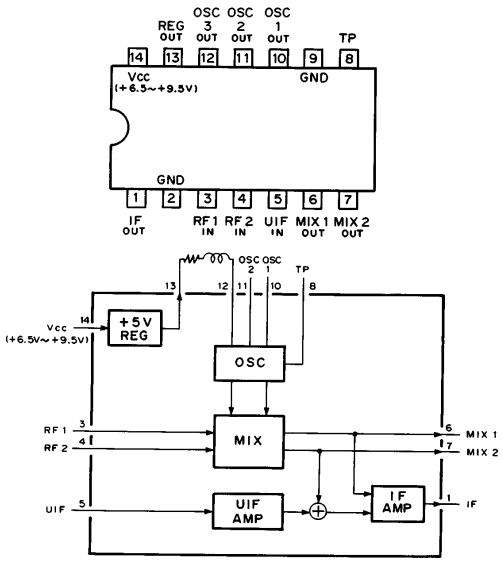
CA3102M (RCA) FLAT PACKAGE

HIGH FREQ.DIFFERNTIAL AMPLIFIER
– TOP VIEW –



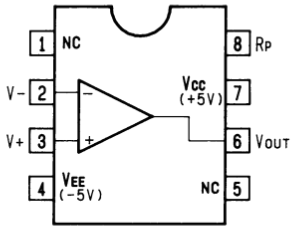
CXA1165AM (SONY) FLAT PACKAGE

CATV VHF TUNER
– TOP VIEW –



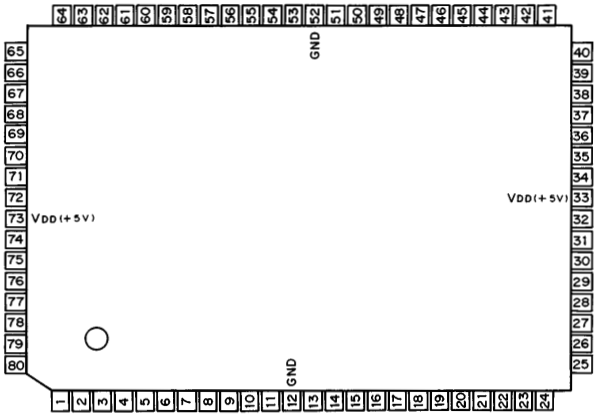
CLC505AJE (COMLINEAR) FLAT PACKAGE

OPERATIONAL AMPLIFIER
– TOP VIEW –

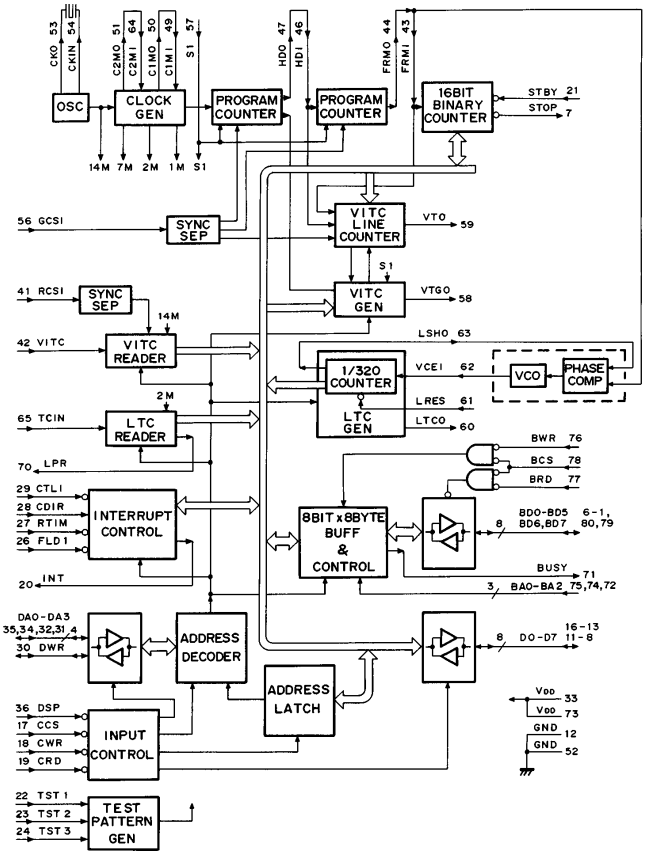


CXD1132Q (SONY) FLAT PACKAGE

C-MOS TIME CODE GENERATOR/READER
– TOP VIEW –



PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL	PIN NO.	I/O	SYMBOL
1	I/O	DB5	17	I	CCS	33	–	V_{DD}	49	I	C1MI	65	I	TCIN
2	I/O	DB4	18	I	CWR	34	I/O	DA1	50	O	C1MO	66	O	DCLK
3	I/O	DB3	19	I	CRD	35	I/O	DA0	51	O	C2MO	67	O	DATA
4	I/O	DB2	20	O	INT	36	I	DSP	52	–	GND	68	O	RFLD
5	I/O	DB1	21	I	STBY	37	O	DTSE	53	O	CKO	69	O	RDSY
6	I/O	DB0	22	I	TST1	38	O	VRCK	54	I	CKIN	70	O	LRP
7	O	STOP	23	I	TST2	39	I	SLLM	55	I	SLCK	71	O	BUSY
8	I/O	D7	24	I	TST3	40	O	RVDO	56	I	GCSI	72	I	BA2
9	I/O	D6	25	I	PON	41	I	RCSI	57	I	S1	73	–	V_{DD}
10	I/O	D5	26	I	FLD1	42	I	VITC	58	O	VTGO	74	I	BA1
11	I/O	D4	27	I	RTIM	43	I	FRMI	59	O	VTO	75	I	BA0
12	–	GND	28	I	CDIR	44	O	FRMO	60	O	LTCO	76	I	BWR
13	I/O	D3	29	I	CTLI	45	O	GLSY	61	I	LRES	77	I	BRD
14	I/O	D2	30	I/O	DWR	46	I	HDI	62	I	VCEI	78	I	BCS
15	I/O	D1	31	I/O	DA3	47	O	HDO	63	O	LSHO	79	I/O	BD7
16	I/O	D0	32	I/O	DA2	48	O	VDO	64	I	C2MI	80	I/O	BD6



SIGNAL DESCRIPTION

BA0-BA2
B ADDRESS INPUTS
BCS B CHIP ENABLE INPUT ("L":ENABLE)
BD0-BD7
B DATA I/O
BRD B READ INPUT ("L":READ)
BUSY B BUSY OUTPUT
BWR B WRITE INPUT ("L":WRITE)
C1MI SYSTEM CLOCK INPUT
C1MO CLOCK 1 OUTPUT (CKIN X 1/16)
C2MI LTC READ CLOCK INPUT
C2MO CLOCK 2 OUTPUT (CKIN X 1/8)
CCS C CHIP ENABLE INPUT ("L":ENABLE)(when DSP is low)
ADDRESS LATCH ENABLE INPUT ("L":ENABLE)(when DSP is high)
CDIR CTL DIRECTION INPUT
CKIN SYSTEM CLOCK INPUT

VIDEO SIGNAL FORMAT	CKIN
SMPTE 29.97HZ 525LINE	14.318MHZ
EBU 25HZ 625LINE	14.500MHZ

CKO CLOCK OUTPUT
CRD C READ INPUT ("L":READ)
CTLI CTL SIGNAL INPUT
CWR C WRITE INPUT ("L":WRITE)
D0-D7 DATA I/O (when DSP is low)/
ADDRESS INPUTS
DA0-DA3
E ADDRESS INPUTS (when DSP is high)
D ADDRESS OUTPUT (when DSP is low)
DATA DEMODULATED SERIAL DATA OUTPUT
DCLK DEMODULATED CLOCK OUTPUT
DSP DISPLAY BUS SELECT INPUT
DSP controls CCS,DA0-DA3 and DVR.
DTSE VITC DATA SEARCH FLAG OUTPUT
DWR WRITE ENABLE OUTPUT ("L":ENABLE)(when DSP is low)
E ADDRESS 4 INPUT (when DSP is high)
EA4 ADDRESS BUS INPUT
FLD1 FIELD REFERENCE INPUT ("L":FILD 1)
FRMI FRAME SIGNAL INPUT
FRMO FRAME SIGNAL OUTPUT
GCSI COMPOSITE SYNC INPUT
GLSY LOST SYNC FLAG OUTPUT
HDI HORIZONTAL SYNC INPUT
HDO HORIZONTAL SYNC OUTPUT
INT ITERRUPT REQUEST OUTPUT
LPR LTC READ REQUEST OUTPUT
LRES LTC COUNTER RESET INPUT ("L":RESET)
LSHO SYNCHRONOUS SIGNAL OUTPUT
LTCO LTC SIGNAL OUTPUT
PON SYSTEM RESET INPUT ("L":PON)
RCSI COMPOSITE SYNC INPUT
RDSY READ SYNC WORD DATA OUTPUT
RESS RESET INPUT ("L":RTIM)
RFLD FIELD DATA OUTPUT
RTIM TIME ADDRESS RESET INPUT ("L":RESET)
RVDO VITC READ DATA OUTPUT
S1 SIGNAL FORMAT SELECT INPUT
"H":NTSC/PAL-M 29.94HZ 525LINE
"L":PAL/SECAM 25Hz 625LINE
SLCK SELECT CLOCK INPUT

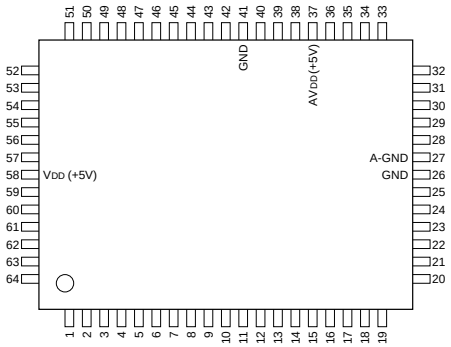
SLCK	"L"		"H"	
CKIN	14.318MHZ	14.5MHZ	7.159MHZ	7.25MHZ
SPEC	SMPTE	EBU	SMPTE	EBU

SLLM READ SIZE SELECT INPUT
STBY STANDBY READ FLAG INPUT
STOP STOP OUTPUT ("L":STOP)
TCIN LONGITUDINAL TIME AND CONTROL CODE INPUT
TST1-TST3
TEST INPUT
VCEI LTC CLOCK INPUT
VDO HORIZONTAL SYNC DRIVE OUTPUT
VITC VITC SIGNAL INPUT
VTGO VITC GATE SIGNAL OUTPUT
VTO VITC SIGNAL OUTPUT ("H":VITC)

-

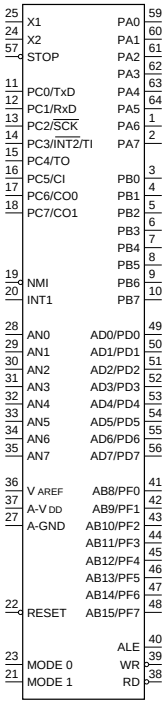
CXD1133Q-321 (SONY)

C-MOS 8-BIT MIROCOMPUTER
– TOP VIEW–



(AVDD, VDD =+5V)

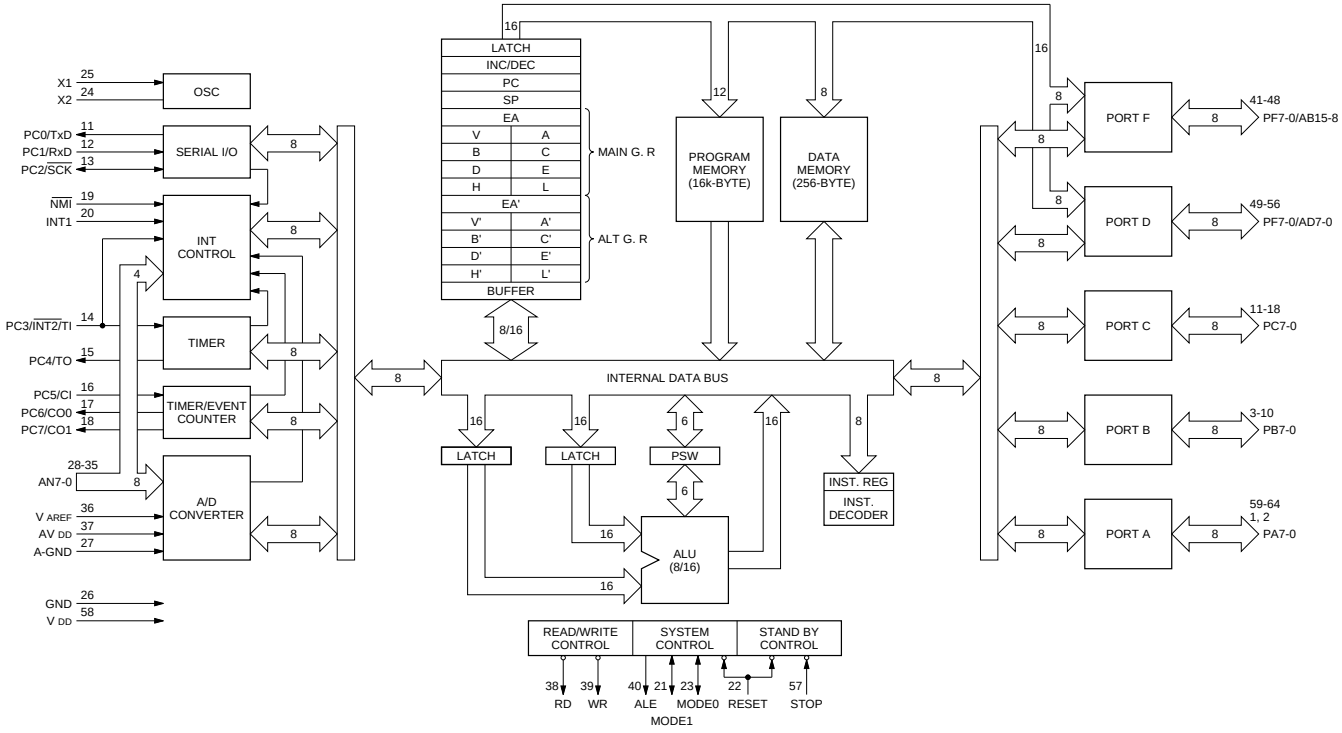
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I/O	PA6	17	I/O	PC6/CO0	33	I	AN5	49	I/O	PD0/AD0
2	I/O	PA7	18	I/O	PC7/CO1	34	I	AN6	50	I/O	PF1/AD1
3	I/O	PB0	19	I	$\overline{NMI}$	35	I	AN7	51	I/O	PD2/AD2
4	I/O	PB1	20	I	INT1	36	I	VAREF	52	I/O	PD3/AD3
5	I/O	PB2	21	I/O	MODE1	37	–	AVDD	53	I/O	PD4/AD4
6	I/O	PB3	22	I	$\overline{RESET}$	38	O	$\overline{RD}$	54	I/O	PD5/AD5
7	I/O	PB4	23	I/O	MODE0	39	O	$\overline{WR}$	55	I/O	PD6/AD6
8	I/O	PB5	24	–	X2	40	O	ALE	56	I/O	PD7/AD7
9	I/O	PB6	25	I	X1	41	I/O	PF0/AB8	57	I	$\overline{STOP}$
10	I/O	PB7	26	–	GND	42	I/O	PF1/AB9	58	–	VDD
11	I/O	PC0/TxD	27	–	A-GND	43	I/O	PF2/AB10	59	I/O	PA0
12	I/O	PC1/RxD	28	I	AN0	44	I/O	PF3/AB11	60	I/O	PA1
13	I/O	PC2/$\overline{SCK}$	29	I	AN1	45	I/O	PF4/AB12	61	I/O	PA2
14	I/O	PC3/$\overline{INT2}$/TI	30	I	AN2	46	I/O	PF5/AB13	62	I/O	PA3
15	I/O	PC4/TO	31	I	AN3	47	I/O	PF6/AB14	63	I/O	PA4
16	I/O	PC5/CI	32	I	AN4	48	I/O	PF7/AB15	64	I/O	PA5



INPUT
AN0-7 ; ANALOG DATA
CI ; COUNTER
INT 1 ; MASKABLE INTERRUPT REQUEST 1
$\overline{INT\ 2}$; MASKABLE INTERRUPT REQUEST 2
$\overline{NMI}$; NON-MASKABLE INTERRUPT REQUEST
$\overline{RESET}$; SYSTEM RESET
RxD ; RECEIVE DATA
$\overline{STOP}$; SYSTEM STOP
TI ; TIMER
VAREF ; REFERENCE VOLTAGE
X1, 2 ; EXTERNAL CRYSTAL, X1; SYSTEM CLOCK INPUT

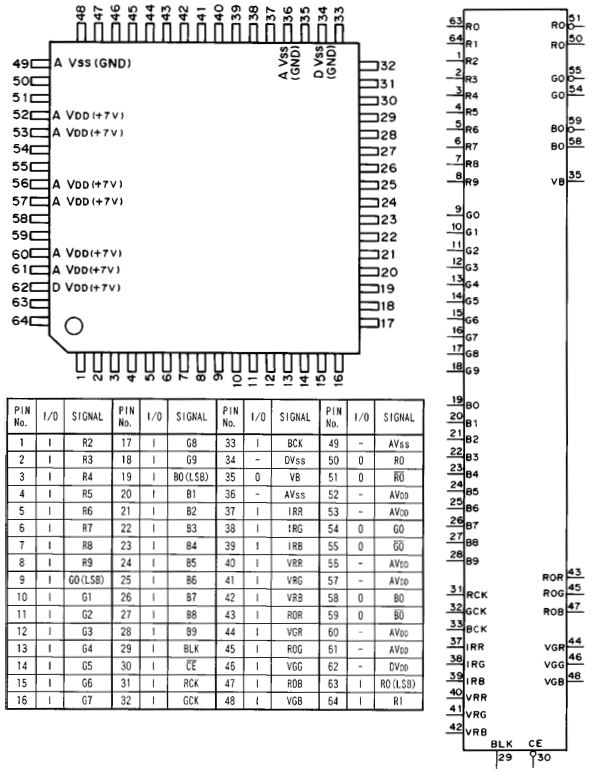
OUTPUT
AB8-15 ; ADDRESS BUS
ALE ; ADDRESS LATCH ENABLE
CO0, 1 ; COUNTER 0, 1
$\overline{RD}$; READ STROBE
TO ; TIMER
TxD ; TRANSMIT DATA
$\overline{WR}$; WRITE STROBE

INPUT/OUTPUT
AD0-7 ; ADDRESS/DATA BUS
MODE 0, 1 ; MEMORY MODE
PA0-7 ; PORT A
PB0-7 ; PORT B
PC0-7 ; PORT C
PD0-7 ; PORT D
PF0-7 ; PORT F
$\overline{SCK}$; SERIAL CLOCK

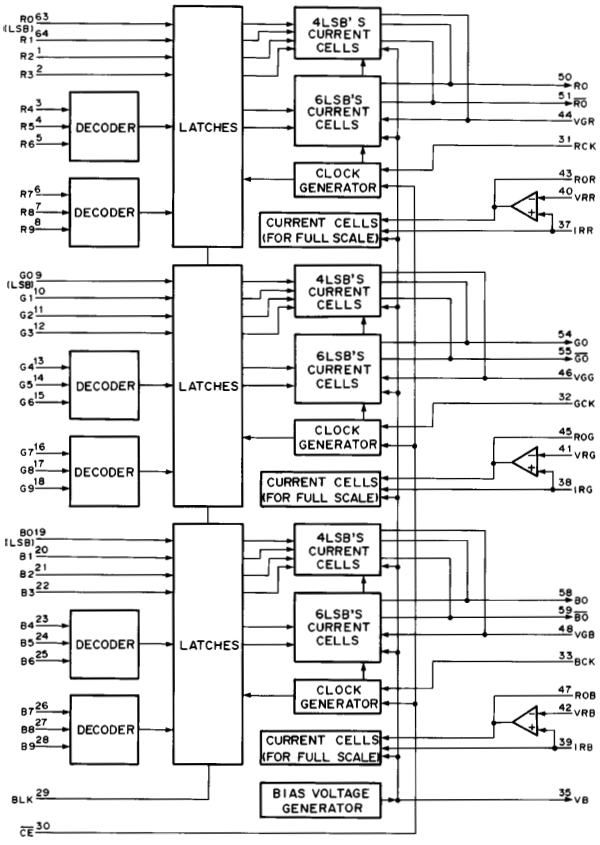


CXD2307R (SONY) FLAT PACKAGE

C-MOS 10-BIT 50MSPS RGB 3CHANNEL D/A CONVERTER
– TOP VIEW –

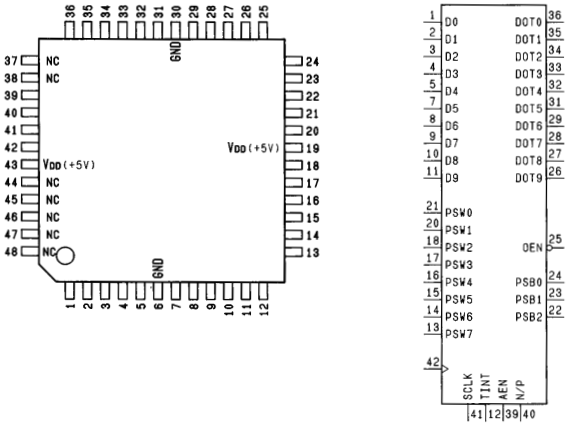


PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	R2	17	I	G8	33	I	BCK	49	–	AVss
2	I	R3	18	I	G9	34	–	DVss	50	O	RO
3	I	R4	19	I	BO (LSB)	35	O	VB	51	O	$\overline{RO}$
4	I	R5	20	I	B1	36	–	AVss	52	–	AVDD
5	I	R6	21	I	B2	37	I	IRR	53	–	AVDD
6	I	R7	22	I	B3	38	I	IRG	54	O	GO
7	I	R8	23	I	B4	39	I	IRB	55	O	$\overline{GO}$
8	I	R9	24	I	B5	40	I	VRR	56	–	AVDD
9	I	GO (LSB)	25	I	B6	41	I	VRG	57	–	AVDD
10	I	G1	26	I	B7	42	I	VRB	58	O	BO
11	I	G2	27	I	B8	43	I	ROR	59	O	$\overline{BO}$
12	I	G3	28	I	B9	44	I	VGR	60	–	AVDD
13	I	G4	29	I	BLK	45	I	ROG	61	–	AVDD
14	I	G5	30	I	$\overline{CE}$	46	I	VGG	62	–	DVDD
15	I	G6	31	I	RCK	47	I	ROB	63	I	RO (LSB)
16	I	G7	32	I	GCK	48	I	VGB	64	I	R1



CXK1203AR (SONY) FLAT PACKAGE

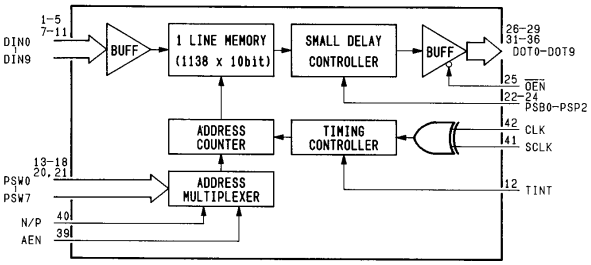
C-MOS DIGITAL LINE MEMORY
– TOP VIEW –



(VDD = +5V)

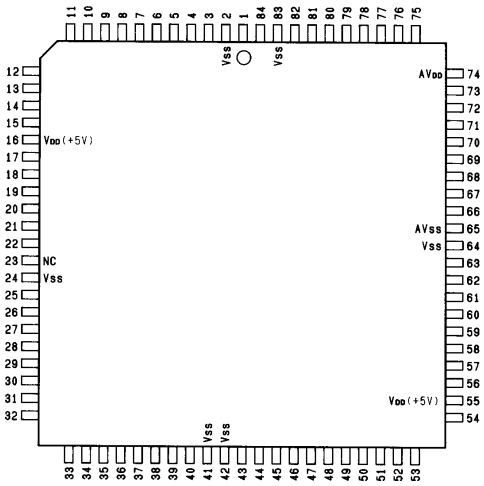
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGANL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	D0	13	I	PSW7	25	I	$\overline{OEN}$	37	–	N.C
2	I	D1	14	I	PSW6	26	O	DOT9	38	–	N.C
3	I	D2	15	I	PSW5	27	O	DOT8	39	I	AEN
4	I	D3	16	I	PSW4	28	O	DOT7	40	I	N/P
5	I	D4	17	I	PSW3	29	O	DOT6	41	I	SCLK
6	–	GND	18	I	PSW2	30	–	GND	42	I	CLK
7	I	D5	19	–	VDD	31	O	DOT5	43	–	VDD
8	I	D6	20	I	PSW1	32	O	DOT4	44	–	N.C
9	I	D7	21	I	PSW0	33	O	DOT3	45	–	N.C
10	I	D8	22	I	PSB2	34	O	DOT2	46	–	N.C
11	I	D9	23	I	PSB1	35	O	DOT1	47	–	N.C
12	I	TINT	24	I	PSB0	36	O	DOT0	48	–	N.C

AEN ;LINE MEMORY SELECT
CLK ;CLOCK
DIN0–DIN9 ;VIDEO DATA INPUT
DOT0–DOT9 ;VIDEO DATA OUTPUT
N/P ;NTSC/PAL/SECAM SELECT
OEN ;OUTPUT ENABLE
PSB0–PSB2 ;DELAY STEP SELECT(1 BITxN)
PSW0–PSW7 ;DELAY STEP SELECT(8 BITxN)
SCLK ;CLOCK EDGE SELECT
TINT ;TEST



HD6435328RA00F (HITACHI)

16-BIT CPU
– TOP VIEW –



INPUT

AN0 – AN7	; ANALOG INPUT
BREQ	; BUS REQUEST
EXRAL	; CONNECTED TO CRYSTAL OSCILLATOR.
FTCI1 – FTCI3	; FRT COUNTER CLOCK INPUT (CHANNEL 1 TO 3)
FTI1 – FTI3	; FRT INPUT CAPTURE INPUT (CHANNEL 1 TO 3)
IRQ0, 1	; INTERRUPTION REQUEST 0 AND 1
MD0 – MD2	; MODE SETTING
NMI	; NON MASKABLE INTERRUPTION
P80 – P87	; PORT 8
RES	; RESET
RXD	; RECEIVE DATA
SYBY	; STANDBY
TMCI	; 8-BIT TIMER CLOCK INPUT
TMRI	; 8-BIT TIMER COUNTER RESET INPUT
WAIT	; WAIT
XRAL	; CONNECTED TO CRYSTAL OSCILLATOR.

OUTPUT

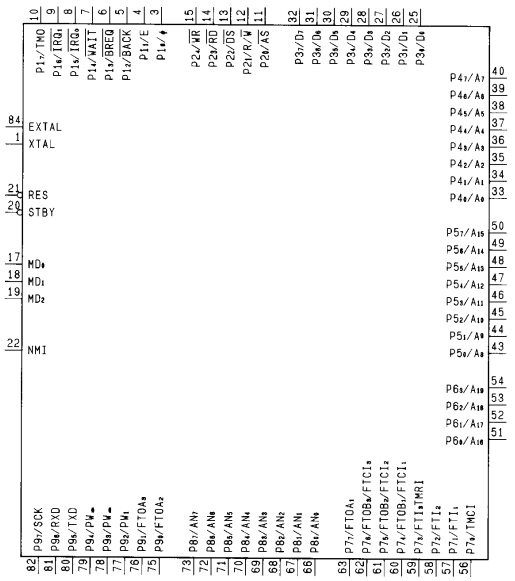
A0 – A19	; ADDRESS BUS
AS	; ADDRESS STROBE
BACK	; BUS REQUEST ACKNOWLEDGE
DS	; DATA STROBE
E	; ENABLE CLOCK
FTOA1 – FTOA3	; FRT OUTPUT COMPARE A OUTPUT (CHANNEL 1 TO 3)
FTOB1 – FTOB3	; FRT OUTPUT COMPARE B OUTPUT (CHANNEL 1 TO 3)
PW1 – PW3	; PWM TIMER OUTPUT (CHANNEL 1 TO 3)
R/W	; READ/WRITE
RD	; READ
TMO	; 8-BIT TIMER OUTPUT
TXD	; SEND DATA
WR	; WRITE
φ	; SYSTEM CLOCK

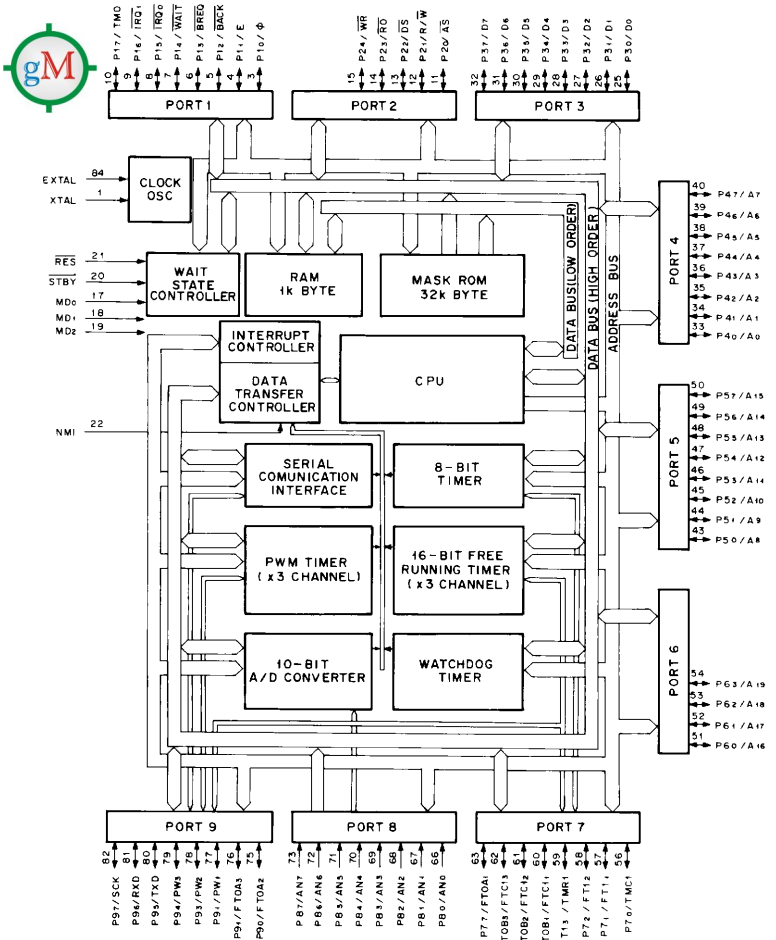
INPUT/OUTPUT

D0 – D7	; DATA BUS
P10 – P17	; PORT 1
P20 – P24	; PORT 2
P30 – P37	; PORT 3
P40 – P47	; PORT 4
P50 – P57	; PORT 5
P60 – P63	; PORT 6
P70 – P77	; PORT 7
P90 – P97	; PORT 9
SCK	; SERIAL CLOCK INPUT/OUTPUT

(VDD = + 5V)

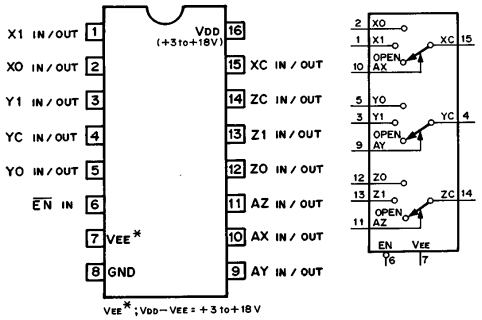
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	XTAL	29	I/O	P34/D4	57	I/O	P71/FTI1
2	–	Vss	30	I/O	P35/D5	58	I/O	P72/FTI2
3	I/O	P10/φ	31	I/O	P36/D6	59	I/O	P73/FTI3/TMRI
4	I/O	P11/E	32	I/O	P37/D7	60	I/O	P74/FTOB1/FTCI1
5	I/O	P12/$\overline{BACK}$	33	I/O	P40/A0	61	I/O	P75/FTOB2/FTCI2
6	I/O	P13/$\overline{BREQ}$	34	I/O	P41/A1	62	I/O	P76/FTOB3/FTCI3
7	I/O	P14/$\overline{WAIT}$	35	I/O	P42/A2	63	O	P77/FTOA1
8	I/O	P15/$\overline{IRQ0}$	36	I/O	P43/A3	64	–	Vss
9	I/O	P16/$\overline{IRQ1}$	37	I/O	P44/A4	65	–	AVss
10	I/O	P17/TMO	38	I/O	P45/A5	66	I/O	P80/AN0
11	I/O	P20/$\overline{AS}$	39	I/O	P46/A6	67	I/O	P81/AN1
12	I/O	P21/R/$\overline{W}$	40	I/O	P47/A7	68	I/O	P82/AN2
13	I/O	P22/$\overline{DS}$	41	–	Vss	69	I/O	P83/AN3
14	I/O	P23/$\overline{RD}$	42	–	Vss	70	I/O	P84/AN4
15	I/O	P24/$\overline{WR}$	43	I/O	P50/A8	71	I/O	P85/AN5
16	–	Vcc	44	I/O	P51/A9	72	I/O	P86/AN6
17	I	MD0	45	I/O	P52/A10	73	I/O	P87/AN7
18	I	MD1	46	I/O	P53/A11	74	–	AVcc
19	I	MD2	47	I/O	P54/A12	75	I/O	P90/FTOA2
20	I	STBY	48	I/O	P55/A13	76	I/O	P91/FTOA3
21	I	RES	49	I/O	P56/A14	77	I/O	P92/PW1
22	I	NMI	50	I/O	P57/A15	78	I/O	P93/PW2
23	–	NC	51	I/O	P60/A16	79	I/O	P94/PW3
24	–	Vss	52	I/O	P61/A17	80	I/O	P95/TXD
25	I/O	P30/D0	53	I/O	P62/A18	81	I/O	P96/RXD
26	I/O	P31/D1	54	I/O	P63/A19	82	I/O	P97/SCK
27	I/O	P32/D2	55	–	Vcc	83	–	Vss
28	I/O	P33/D3	56	I/O	P70/TMCI	84	I	EXTAL





HD14053BFP (HITACHI) FLAT PACKAGE
MC14053BF (MOTOROLA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXERS/DEMULTIPLEXERS
– TOP VIEW –

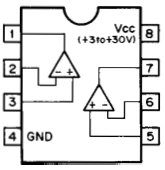

X1 IN / OUT 1
XO IN / OUT 2
Y1 IN / OUT 3
YC IN / OUT 4
YO IN / OUT 5
EN IN 6
VEE * 7
GND 8
VDD (+3 to +18V) 16
XC IN / OUT 15
ZC IN / OUT 14
Z1 IN / OUT 13
ZO IN / OUT 12
AZ IN / OUT 11
AX IN / OUT 10
AY IN / OUT 9
OPEN AX
OPEN AY
OPEN AZ
EN 6
VEE 7
VEE * ; VDD – VEE = +3 to +18 V

CONT. INPUTS		ON
EN	A (X, Y, Z)	CHANNEL
0	0	0
0	1	1
1	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

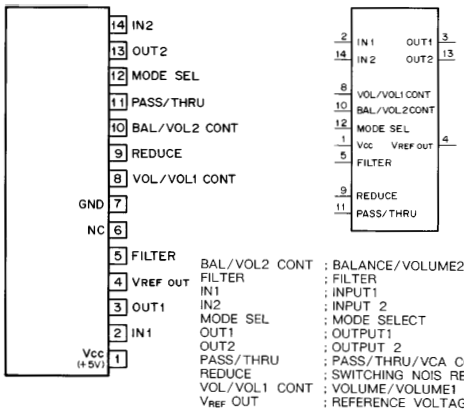
LM358PS (TI) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIERS
– TOP VIEW –

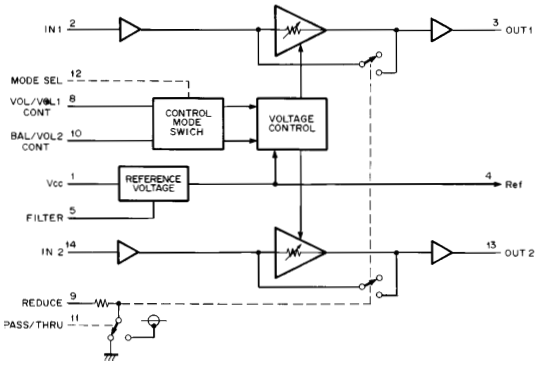


M51131L (MITSUBISHI)

2CH ELECTRIC VOLUME BALANCE CONTROL
– SHOW VIEW –

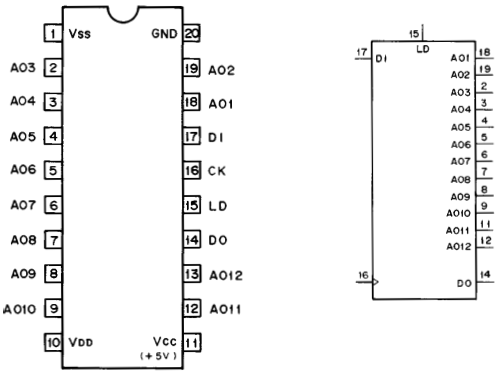


BAL/VOL2 CONT	; BALANCE/VOLUME2 CONTROL
FILTER	; FILTER
IN1	; INPUT1
IN2	; INPUT 2
MODE SEL	; MODE SELECT
OUT1	; OUTPUT1
OUT2	; OUTPUT 2
PASS/THRU	; PASS/THRU/VCA CONTROL SWITCH
REDUCE	; SWITCHING NOIS REDUCE
VOL/VOL1 CONT	; VOLUME/VOLUME1 CONT
V_{REF} OUT	; REFERENCE VOLTAGE OUTPUT



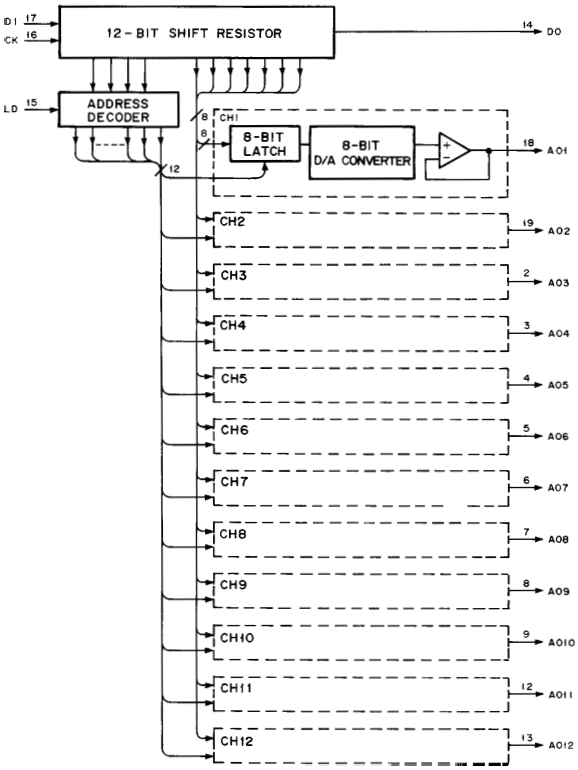
M62352GP (MITSUBISHI) FLAT PACKAGE

C-MOS 8-BITX12 CHANNEL D/A CONVERTER
(WITH BUFFER OPERATIONAL AMPLIFIER)
– TOP VIEW –



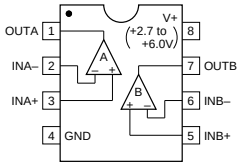
AO1 – AO12 ; 8-BIT D/A OUTPUT
CK ; CLOCK INPUT
DI ; SERIAL DATA INPUT
DO ; DATA OUTPUT

NOTE :
3.5V < V_{DD} < Vcc
– 3.5V < V_{SS} < V_{CC}



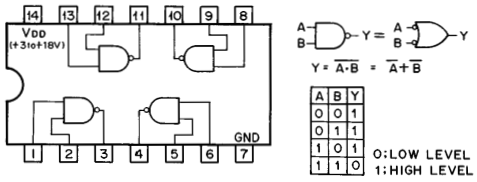
MAX942CSA (MAXIN)

C-MOS 3V/5V RAIL SINGLE SUPPLY COMPARATORS
– TOP VIEW –



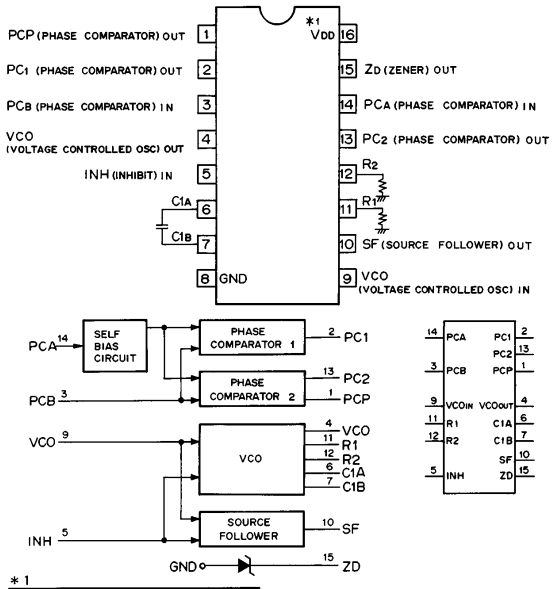
MC14011BF (MOTOROLA) FLAT PACKAGE

C-MOS 2-INPUT NAND GATE
– TOP VIEW –



MC14046BF (MOTOROLA) FLAT PACKAGE

C-MOS PHASE LOCKED LOOP
– TOP VIEW –

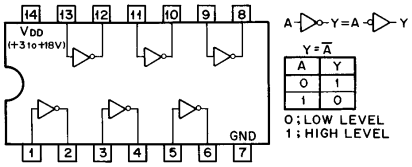


*1

TYPE	VDD
CD4046BE HD14046BP MC14046BCP MC14046BF TC4046BP	+ 3 to + 8V
CD74HC4046AM MC74HC4046AF MC74HC4046AN	+ 2 to + 6V

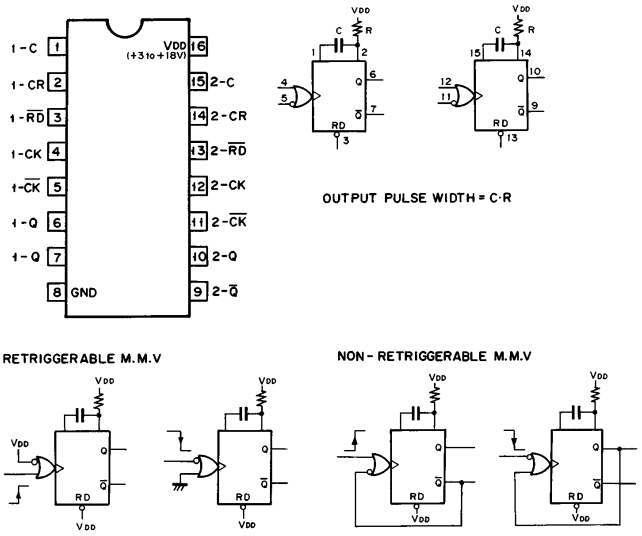
MC4069UBE (RCA)

C-MOS INVERTER
– TOP VIEW –



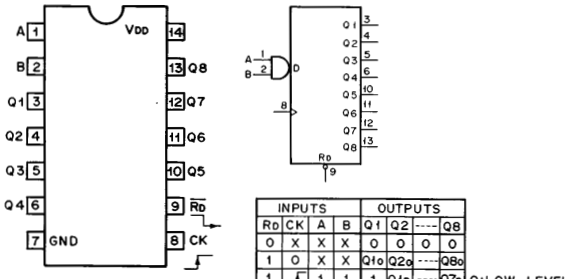
MC14538BF (MOTOROLA) FLAT PACKAGE

C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATORS
– TOP VIEW –



MC74HC164F (MOTOROLA) FLAT PACKAGE
SN74HC164ANS (TI) FLAT PACKAGE
SN74HC164APW (TI) FLAT PACKAGE

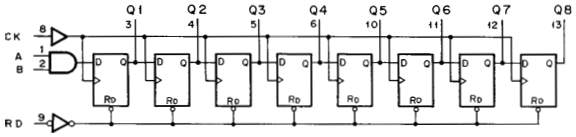
C-MOS 8-BIT SERIAL-IN/PARALLEL-OUT SHIFT REGISTER
– TOP VIEW –



INPUTS				OUTPUTS				
RD	CK	A	B	Q1	Q2	----	Q8	
0	X	X	X	0	0	0	0	
1	0	X	X	Q1o	Q2o	----	Q8o	
1	↑	1	1	1	Q1n	----	Q7n	0;LOW LEVEL
1	↑	0	X	0	Q1n	----	Q7n	1;HIGH LEVEL
1	↑	X	0	0	Q1n	----	Q7n	X;DON'T CARE

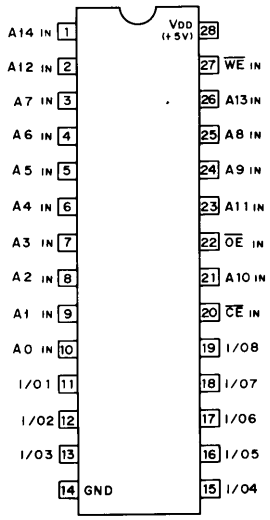
NOTE :

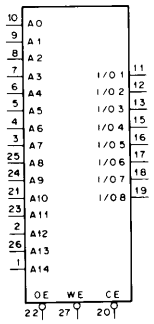
TYPE	VDD
AC/VHC	+2 to +5.5V
HC	+2 to +6V
HCT	+5V



MS62256CLL-10FC (MOSEL) FLAT PACKAGE

C-MOS 32768-WORDX8-BIT STATIC RAM
– TOP VIEW –





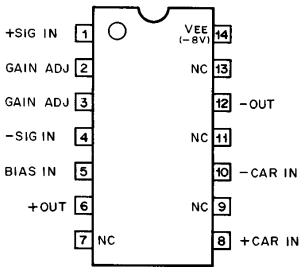
A0 – A14 ; ADDRESS INPUTS
CE ; CHIP ENABLE INPUT
I/O1 – I/O8 ; DATA INPUTS/OUTPUTS
OE ; OUTPUT ENABLE INPUT
WE ; WRITE ENABLE INPUT

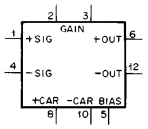
CE	OE	WE	MODE	I/O TERMINAL
1	X	X	NOT SELECT	HIGH IMPEDANCE
0	1	1	OUTPUT DISABLE	HIGH IMPEDANCE
0	0	1	READ	OUTPUT DATA
0	X	0	WRITE	INPUT DATA

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

NJM1496M (JRC) FLAT PACKAGE

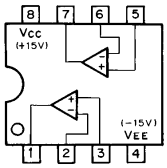
BALANCED MODULATOR/DEMODULATOR
– TOP VIEW –





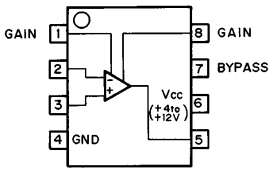
NJM2041M-D (JRC) FLAT PACKAGE
NJM2043M-D (JRC) FLAT PACKAGE
NJU7022M (JRC) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
– TOP VIEW –



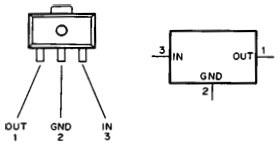
NJM386M (JRC) FLAT PACKAGE

AUDIO POWER AMPLIFIER
– TOP VIEW –



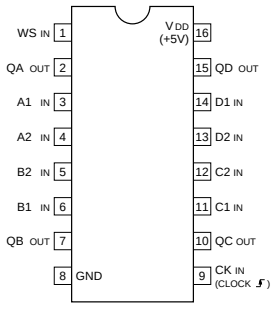
NJM78L05UA (JRC) +5 V(100 MA)

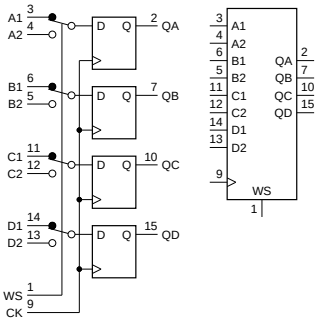
POSITIVE VOLTAGE REGULATOR
– SIDE VIEW –



NJM3414M (NJM) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIER
– TOP VIEW –





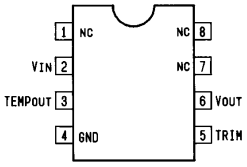
WS : WORD SELECT

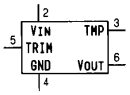
INPUTS		OUTPUTS			
WS	CK	QA	QB	QC	QD
0	↓	A1	B1	C1	D1
1	↓	A2	B2	C2	D2
X	0	QA0	QB0	QC0	QD0

1 ; HIGH LEVEL
0 ; LOW LEVEL
X ; DONT CARE

REF-03GS (PMI)

REFERENCE/TEMPERATURE TRANSDUCER
– TOP VIEW –

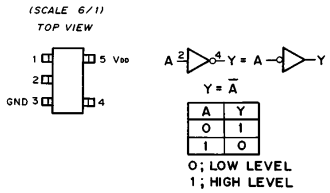




VIN : INPUT VOLTAGE(+4.5Vto+33V)
TEMPOUT : TEMPERATURE TRANSDUCER VOLTAGE OUTPUT
TRIMIN : OUTPUT SIGNAL TRIMMING
VOUT : OUTPUT VOLTAGE(+2.5V)

SC7S04F (MOTOLOLA) CHIP PACKAGE
TC4S69F (TOSHIBA) CHIP PACKAGE
TC4SU69F (TOSHIBA) CHIP PACKAGE
TC7S04F (TOSHIBA) CHIP PACKAGE

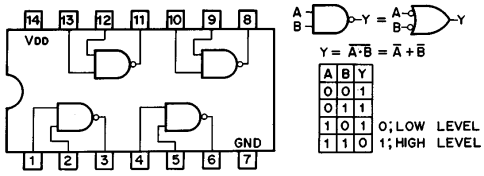
C-MOS INVERTER



TYPE	VDD
7S04F 7SU04F	+ 2 to + 6V
4S69F 4SU69F	+ 3 to + 18V
7SH04FU	+ 2 to + 5.5V

SN74HC00APW (TI)

C-MOS QUAD 2-INPUT NAND GATES
– TOP VIEW –

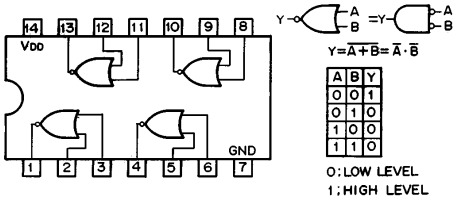


NOTE :

TYPE	VDD
TC74AC00 TYPE TC74VHC00	+2 to +5.5V
MC74HCT00N	+5V
74ACT00 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC02APW (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NOR GATES
– TOP VIEW –

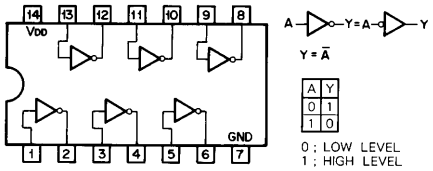


NOTE :

TYPE	VDD
HC	+2 to +6V
AC/VHC	+2 to +5.5V
HCT/ACT	+5V

SN74HC04APW (TI) FLAT PACKAGE
SN74HC04APW-E20 (TI) FLAT PACKAGE
SN74HCU04ANS (TI) FLAT PACKAGE
TC74VHCU04FS (TOSHIBA) FLAT PACKAGE(SMALL)

C-MOS HEX INVERTERS
–TOP VIEW –

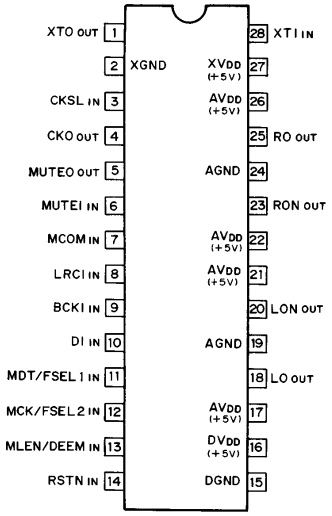


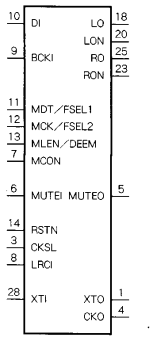
NOTE :

TYPE	VDD
74HCT04 TYPE	+ 5V
TC74AC04 TYPE TC74VHC04 TYPE	+ 2 to + 5.5V
74ACT04 TYPE	+ 4.5 to + 5.5V
OTHER TYPES	+ 2 to + 6V

SM5872AS-ET (NPC) FLAT PACKAGE

C-MOS 2-CHANNEL D/A CONVERTER FOR DIGITAL AUDIO
– TOP VIEW –





AVDD, AGND ; ANALOG
DVDD, DGND ; DIGITAL
XVDD, XGND ; FOR CRYSTAL OSCILLATOR

INPUT

BCKI	; BIT CLOCK
CKSL	; SYSTEM CLOCK SELECT (L : 256fs/H : 512fs)
DI	; DATA
LRCI	; SAMPLE RATE (fs) CLOCK (L : R-CH/H : L-CH)
MCK/FSEL2	; MCOM = H : MICROCOMPUTER INTERFACE CLOCK MCOM = L : FILTER SELECT *2
MCON	; INTERFACE SELECT CONTROL *1
MDT/FSEL1	; MCOM = H : MICROCOMPUTER INTERFACE DATA MCOM = L : FILTER SELECT *2
MLEN/DEEM	; MCOM = H : MICROCOMPUTER INTERFACE LATCH ENABLE MCOM = L : DEEMPHASIS CONTROL
MUTEI	; DF OUTPUT SOFT MUTE (L : OFF/H : ON)
RSTN	; SYSTEM RESET
XTI	; OSCILLATOR

*1

MCOM	MODE
0	FSEL1, FSEL2, DEEM
1	MDT, MCK, MLEN

0 : LOW LEVEL
1 : HIGH LEVEL

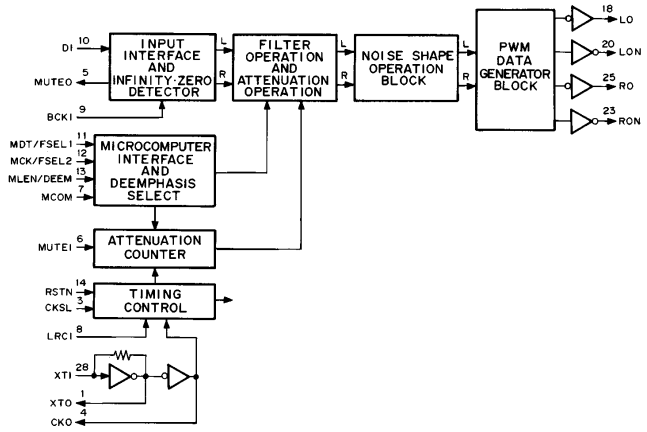
*2

MCOM	FSEL1	FSEL2	
0	0	0 (44.1kHz)	1 (48.0kHz)
0	1	0 (44.1kHz)	1 (32.0kHz)

0 : LOW LEVEL
1 : HIGH LEVEL

OUTPUT

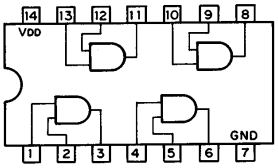
CKO	; CLOCK
LO	; L-CH PWM (PULSE WIDTH MODULATION) (+)
LON	; L-CH PWM (PULSE WIDTH MODULATION) (–)
MUTEO	; INFINITY ZERO DETECT
RO	; R-CH PWM (PULSE WIDTH MODULATION) (+)
RON	; R-CH PWM (PULSE WIDTH MODULATION) (–)
XTO	; OSCILLATOR

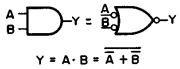


http://getMANUAL.com

SN74HC08APW (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT AND GATES
– TOP VIEW –





A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

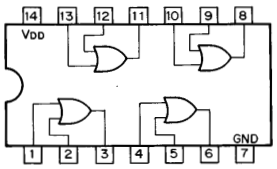
0 ; LOW LEVEL
1 ; HIGH LEVEL

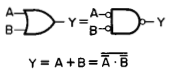
NOTE :

TYPE	V_{DD}
TC74AC08 TYPE MC74ACT08M	+ 2 to + 5.5V
TC40H	+ 2 to + 8V
OTHER TYPES	+ 2 to + 6v

SN74HC32APW (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT OR GATES
– TOP VIEW –





A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

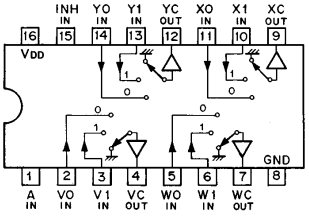
0:LOW LEVEL
1:HIGH LEVEL

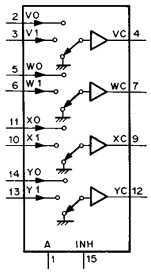
NOTE :

TYPE	V_{DD}
AC/VHC	+2 to +5.5V
HC	+2 to +6V

SN74HC157ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER
–TOP VIEW –





NOTE :

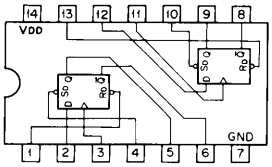
TYPE	V_{DD}
74ACT/74FCT	+ 5V
TC74AC157P TC74AC157	+ 2 to + 5.5V
TC40H	+ 2 to + 8V
OTHER TYPES	+ 2 to + 6V

CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	GND

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

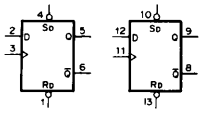
SN74HC74APW-E05 (TI) FLAT PACKAGE
TC74VHC74FS(EL) (TOSHIBA) FLAT PACKAGE(SMALL)

C-MOS DUAL D-TYPE FLIP-FLOPS WITH DIRECT SET/RESET
– TOP VIEW –



INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	D	Qn+1	$\overline{Q_{n+1}}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	$\overline{Q_n}$

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

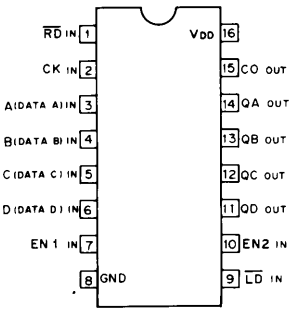


NOTE :

TYPE	V_{DD}
HCT/ACT	+5V
TC74AC/VHC	+2 to +5.5V
OTHERS	+2 to +6V

SN74HC163APW (TI) FLAT PACKAGE

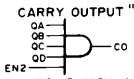
C-MOS PRESETTABLE SYNCHRONOUS 4-BIT BINARY COUNTER
– TOP VIEW –



MODE SELECTION

CONTROL INPUTS				MODE
RD	LD	EN1	EN2	
0	X	X	X	RESET (SYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

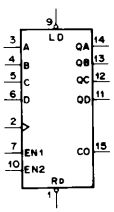
CARRY OUTPUT "CO"



CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

NOTE :

TYPE	V_{DD}
HC	+2 to +6V
AC/VHC	+2 to +5.5V
HCT/ACT/FCT	+5V

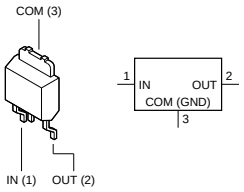


COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

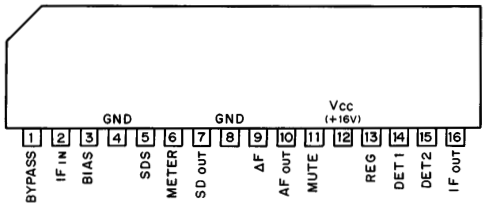
TA78M09F (TOSHIBA)

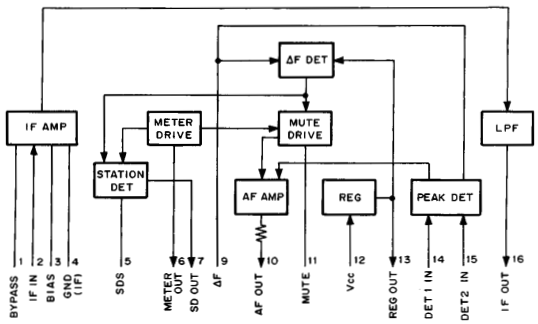
POSITIVE VOLTAGE REGULATOR (0.5A)
– TOP VIEW –



TA8129Z (TOSHIBA)

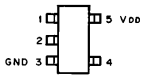
FM IF SYSTEM (DIFFERENTIAL PEAK DETECT)
– SIDE VIEW –

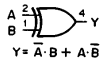




TC4S30F (TOSHIBA) CHIP PACKAGE

C-MOS 2-INPUT EXCLUSIVE OR GATE
– TOP VIEW –





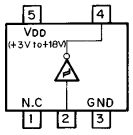
A	B	Y
0	0	0
0	1	1
1	0	1
1	1	0

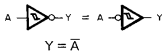
0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
7S86FU 7S86F	+2 to +6V
4S30F	+3 to +18V

TC4S584FEL (TOSHIBA) FLAT PACKAGE

C-MOS SCHMITT TRIGGER INVERTER
– TOP VIEW –





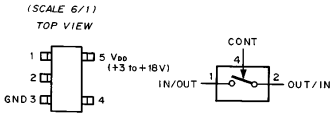
$Y = \overline{A}$

A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4S66F (TOSHIBA) CHIP PACKAGE

C-MOS BILATERAL ANALOG SWITCH

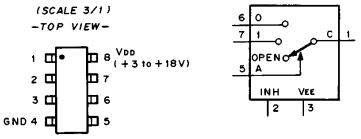


CONT	SWITCH
0	OFF
1	ON

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC4W53FU (TOSHIBA) CHIP PACKAGE

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER

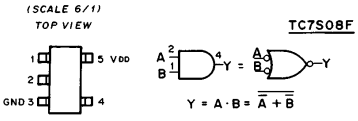


0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

CONT. INPUT		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	OPEN

TC7S08FU (TOSHIBA) CHIP PACKAGE

C-MOS 2-INPUT AND GATE



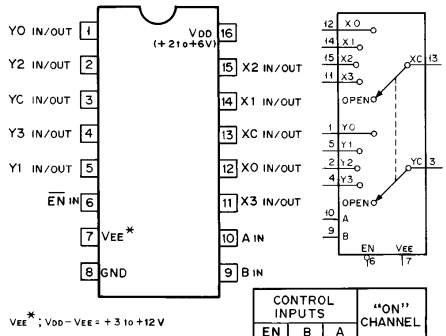
A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
7S08F 7S08FU	+2 to +6V
4S81F 14S81F	+3 to +18V
7SH08FU	−2 to +5.5V

TC74HC4052AFS(EL) (TOSHIBA) FLAT PACKAGE

C-MOS DUAL 4-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –



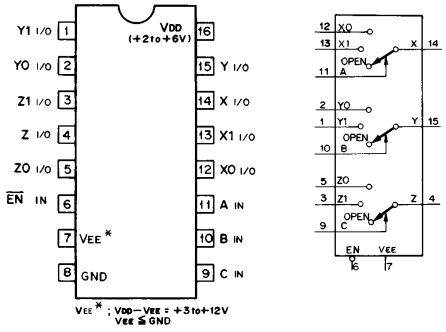
VEE* ; VDD − VEE = +3 to +12 V

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE.

CONTROL INPUTS			"ON" CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

TC74HC4053AFS (TOSHIBA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG MULTIPLEXER/DEMULTIPLEXER
– TOP VIEW –

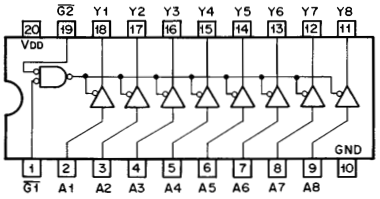


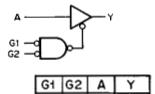
CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	X	X	X	OPEN		

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

TC74VHC541FS(EL) (TOSHIBA) FLAT PACKAGE(SMALL)

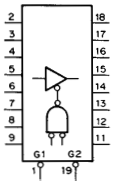
C-MOS BUFFERS AND LINE DRIVERS WITH 3-STATE OUTPUTS
– TOP VIEW –





G1	G2	A	Y
0	0	0	0
0	0	1	1
1	X	X	HI-Z
X	1	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE

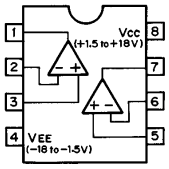


NOTE :

TYPE	VDD
AC/VHC	+2 to +5.5V
HC	+2 to +6V
ABT/ACT/BCT/HCT	+5V

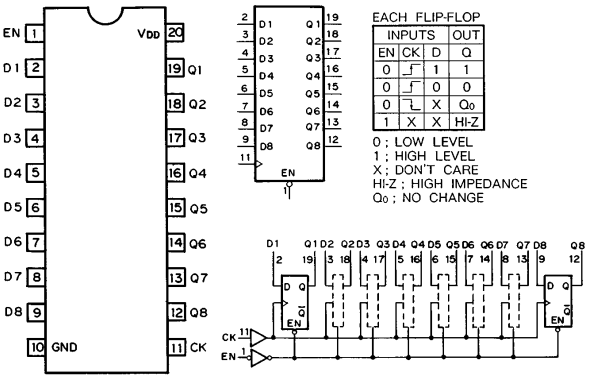
TL062CPS (TI) FLAT PACKAGE
TL062CPW (TI) FLAT PACKAGE
TL082CPS (TI) FLAT PACKAGE
TL082M (TI)

OPERATIONAL AMPLIFIER (J FET INPUT)
–TOP VIEW –



TC74VHC574FS(EL) (TOSHIBA) FLAT PACKAGE(SMALL)

C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP
– TOP VIEW –



EACH FLIP-FLOP

INPUTS			OUT
EN	CK	D	Q
0	↑	1	1
0	↑	0	0
0	↓	X	Q_0
1	X	X	HI-Z

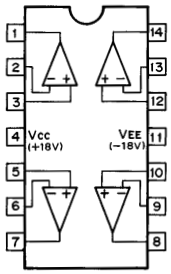
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
Q_0 ; NO CHANGE

NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74ACT/74FCT /74HCT	+5V
TC74AC574F TC74VHC574	+2 to +5.5V

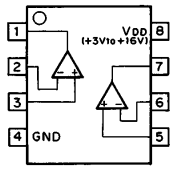
TL064CPW (TI)

OPERATIONAL AMPLIFIER (J FET INPUT)
–TOP VIEW –



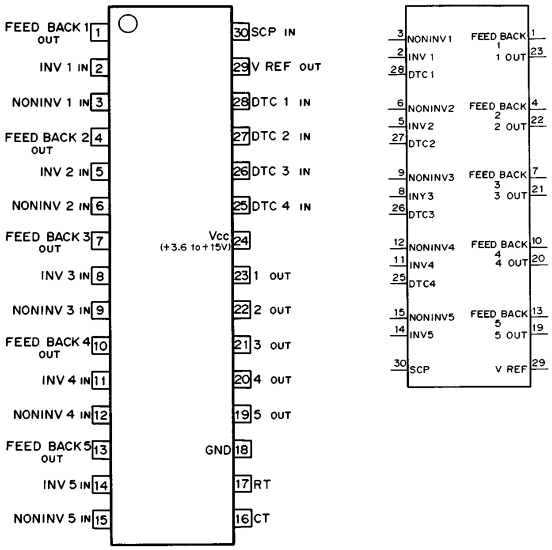
TLC272CPW (TI)
TLC277CPS (TI) FLAT PACKAGE
TLC27L2CPS (TI) FLAT PACKAGE
TLC27M2CPS (TI) FLAT PACKAGE

OPERATIONAL AMPLIFIER
– TOP VIEW –



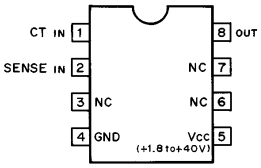
TL1455CDB (TI) FLAT PACKAGE

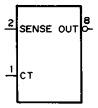
HIGH SPEED SWITCHING REGULATOR CONTROLLER
– TOP VIEW –

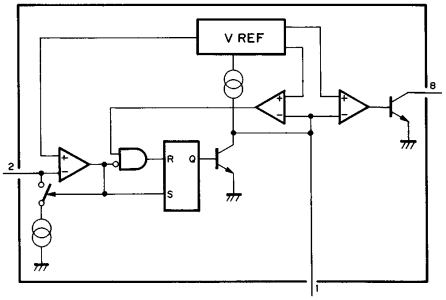


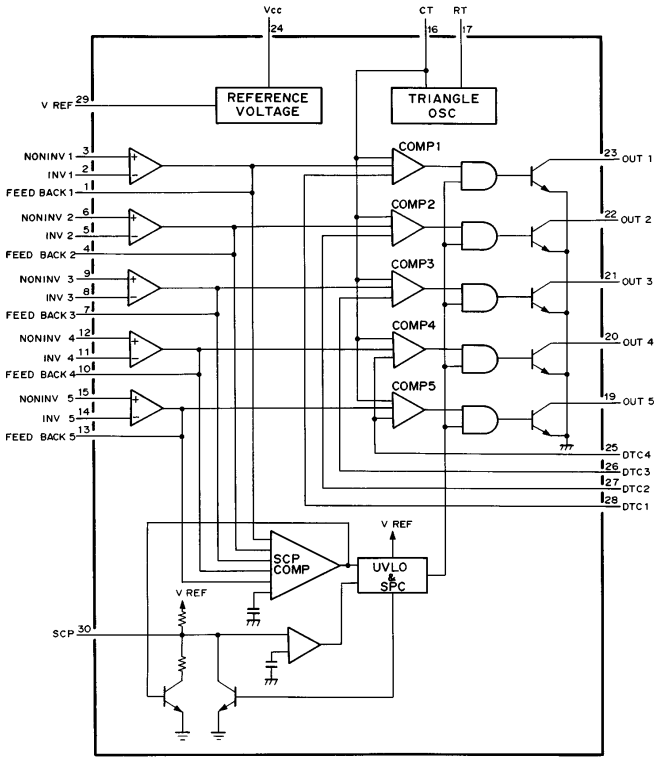
TL7700CPS (TI) FLAT PACKAGE

VARIABLE SUPPLY VOLTAGE SUPERVISOR
– TOP VIEW –









Section 6
Parts List & Optional Fixtures List

6-1. Notes on Spare Parts

1. Safety Related Components Warning

Components marked with ⚠ on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation. Replace these components with Sony parts whose part numbers appear in this manual or in service bulletin and service manual supplements published by Sony.

2. Standardization of Parts

Repair parts supplied by Sony may not be always identical with the parts which actually in use due to "accommodating the improved pats and/or engineering changes" or "standardization of genuine parts".
This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present".

3. Stock of Parts

Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

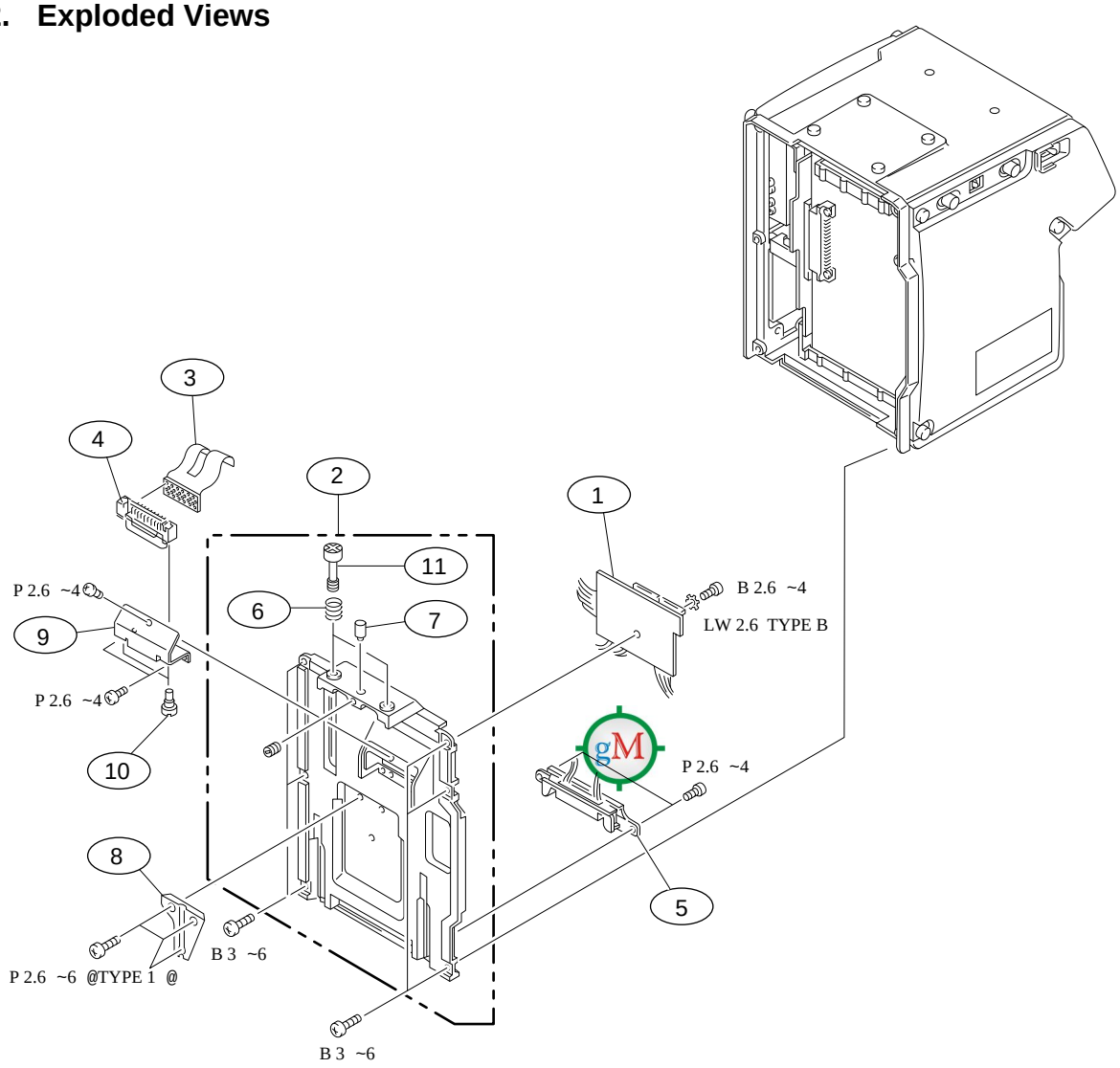
4. Units for Capacitor, Inductor and Resistor

In the electrical parts list, the units of capacitor and inductor are described as follows:

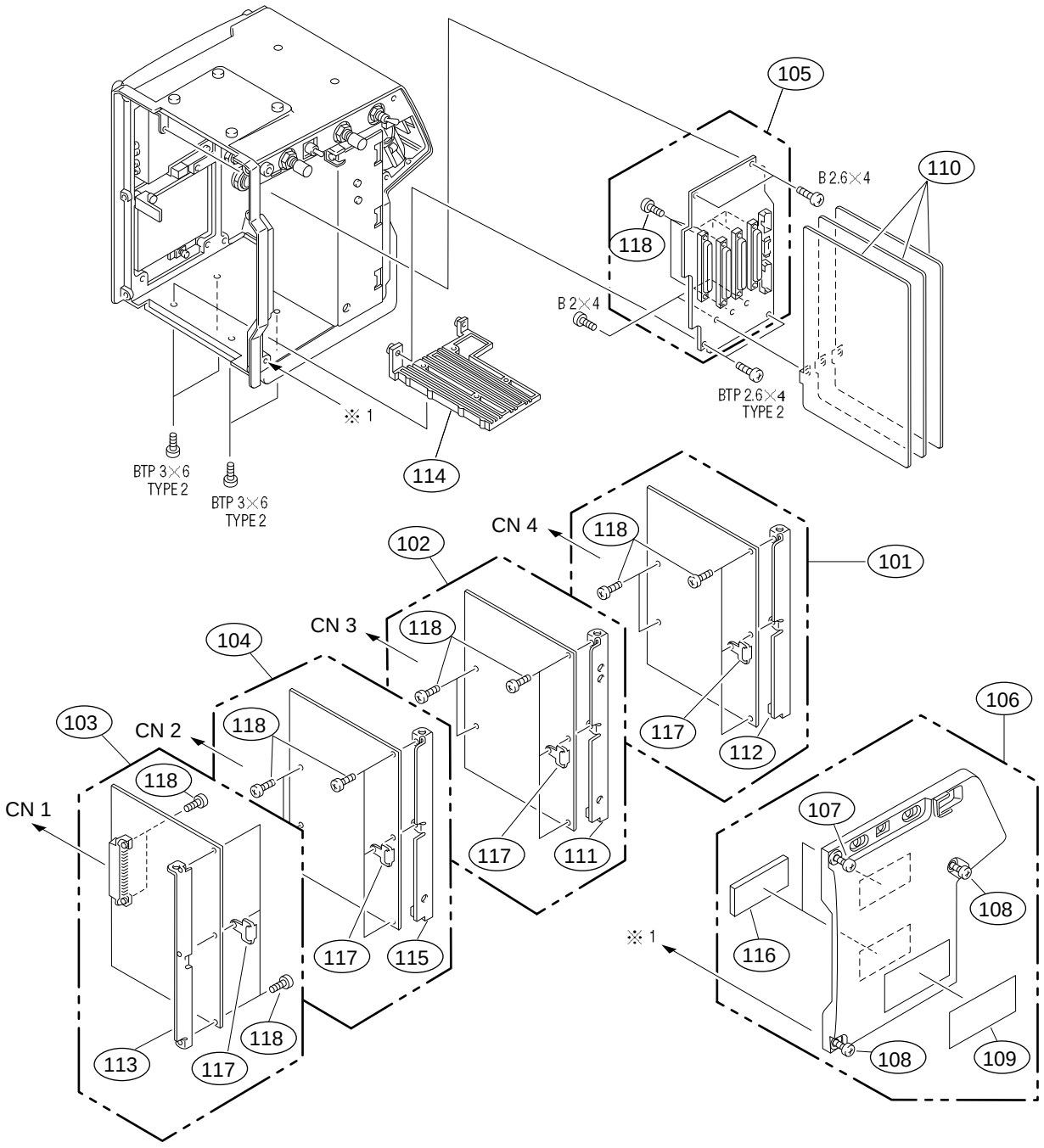
Capacitor : MF (means μF)
Inductor : UH (means μH)

And the unit of resistor [Ω] is omitted.

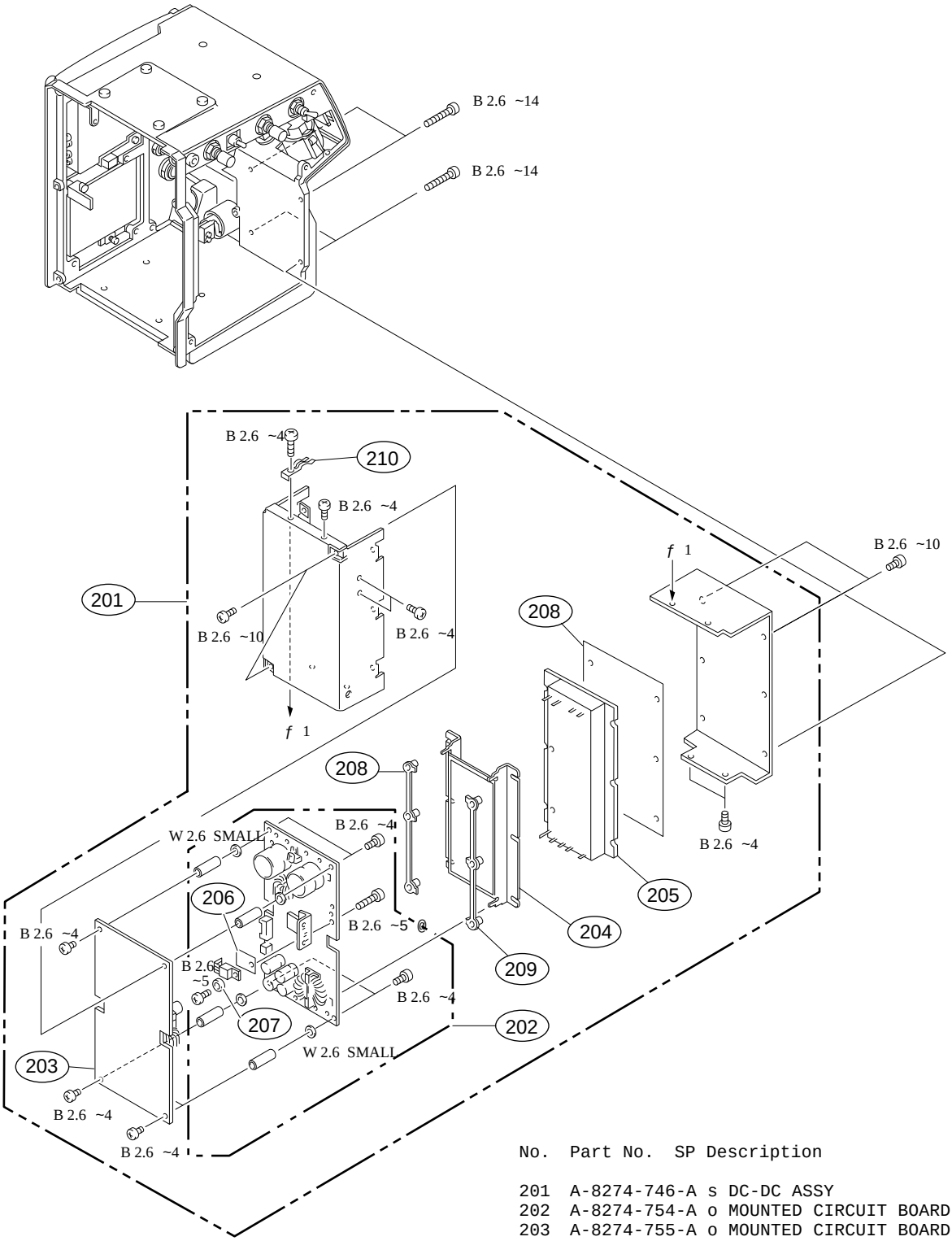
6-2. Exploded Views



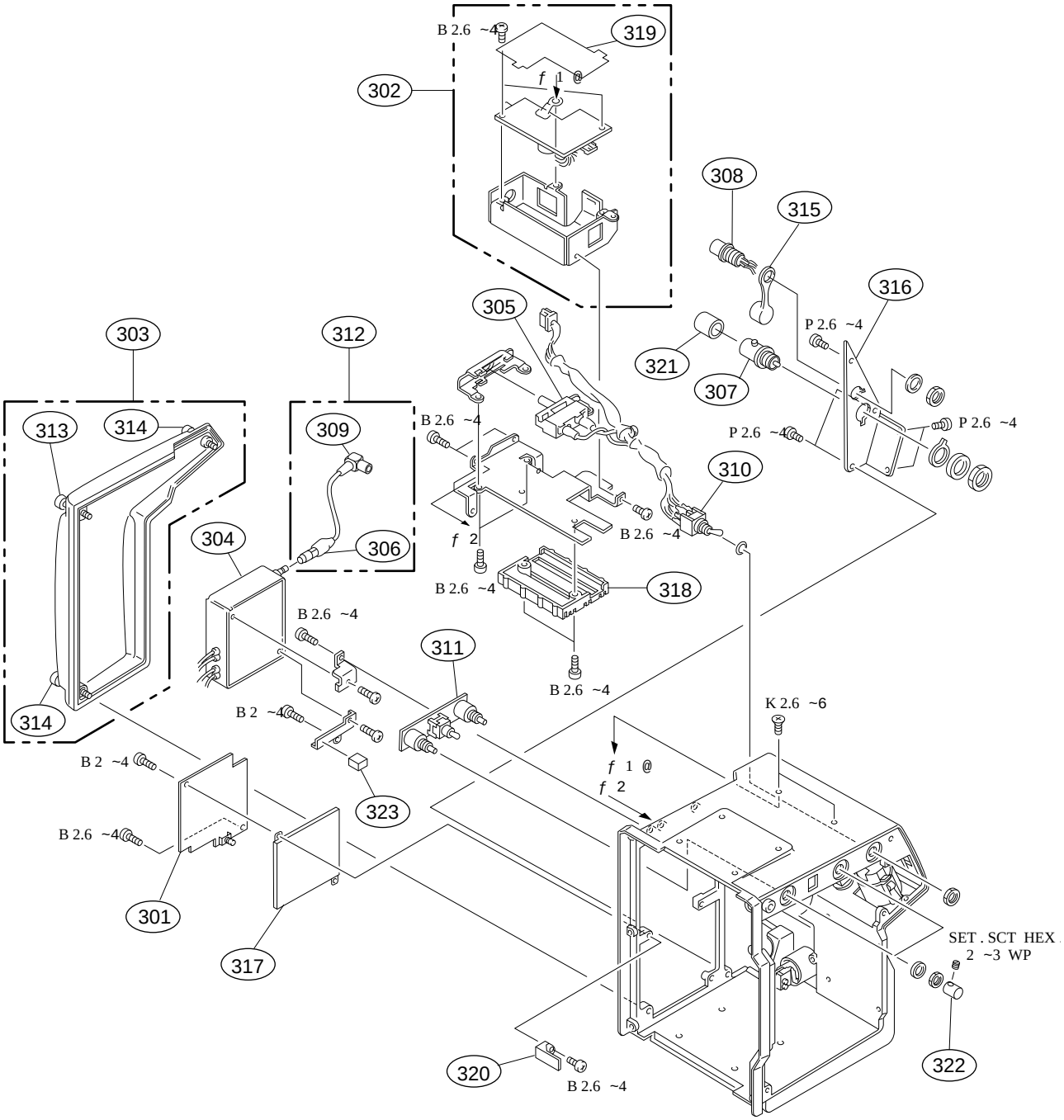
No.	Part No.	SP	Description
1	A-8274-767-A	o	MOUNTED CIRCUIT BOARD, CN-1154
2	X-3678-282-1	o	PLATE SUB ASSY,CHUCKING
3	1-656-062-11	o	PRINTED CIRCUIT BOARD, CN-1176
4	1-766-437-11	s	CONNECTOR, BOARD TO BOARD 40P
5	1-766-967-21	o	CONNECTOR, BATTERY
6	3-564-029-00	s	SPRING, COMPRESSION
7	3-686-349-01	o	SHAFT,GUIDE
8	3-686-350-01	o	SHUE(3)
9	3-686-366-01	o	CONNECTOR BRACKET
10	3-686-367-01	s	SCREW,STEP
11	3-734-583-01	s	SCREW



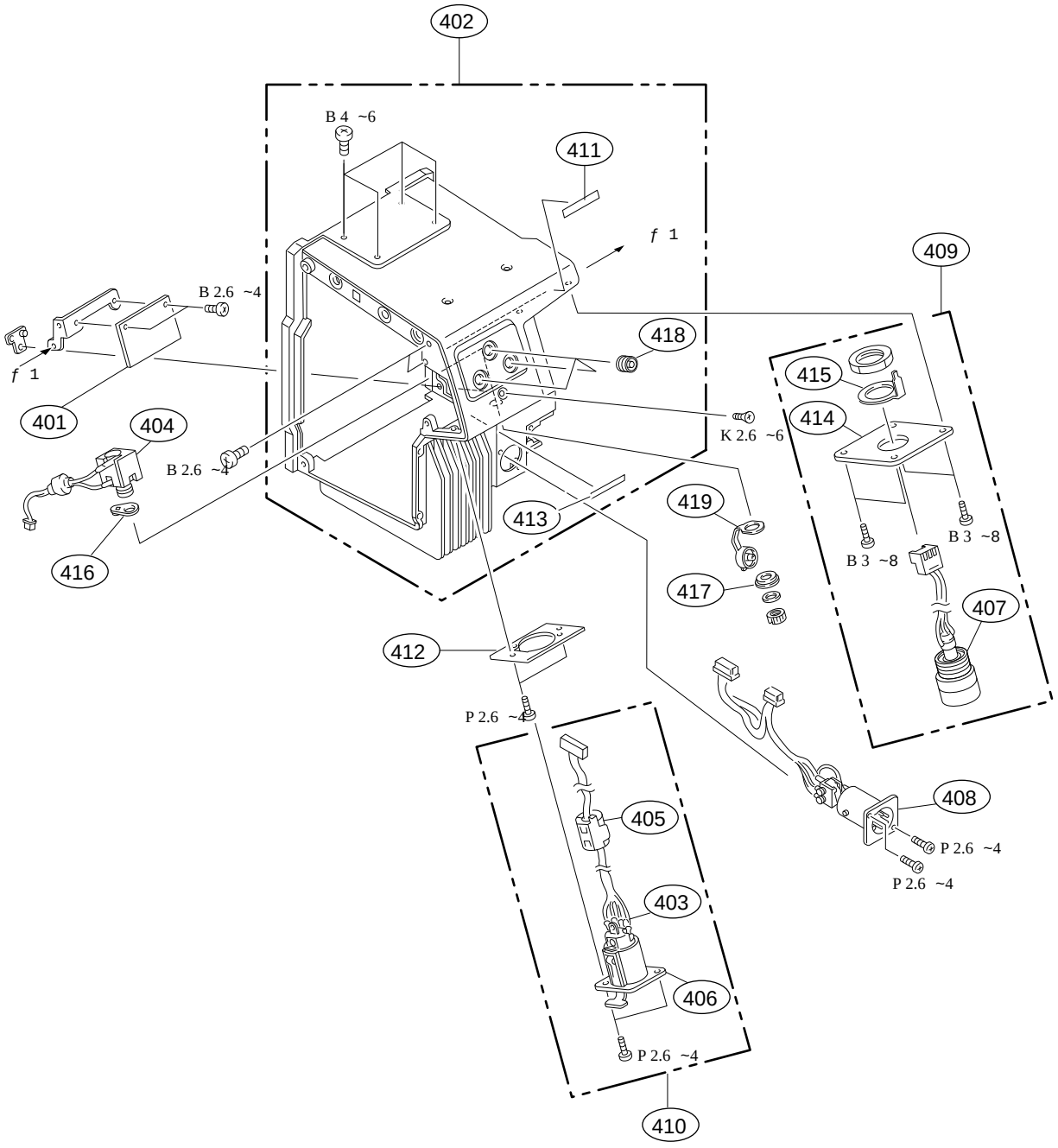
No.	Part No.	SP	Description
101	A-8274-747-A	o	MOUNTED CIRCUIT BOARD, IF-501
102	A-8274-748-A	o	MOUNTED CIRCUIT BOARD, TR-89
103	A-8274-749-A	o	MOUNTED CIRCUIT BOARD, DA-89
104	A-8274-750-A	o	MOUNTED CIRCUIT BOARD, MD-102
105	A-8274-751-A	o	MOUNTED CIRCUIT BOARD, MB-590
106	X-3678-279-1	o	PANEL(IN SIDE) ASSY
107	3-175-715-02	s	SCREW, FITTING, ADAPTOR
108	3-175-715-22	s	SCREW, FITTING, ADAPTOR
109	3-685-693-01	o	LABEL DISCERN
110	3-686-353-01	o	PCB SHILD
111	3-686-355-01	o	PCB PANEL(TR)
112	3-686-356-01	o	PCB PANEL(IF)
113	3-686-357-01	o	PCB PANEL(DA)
114	3-686-359-01	o	LOWER PCB GUIDE
115	3-686-369-01	o	PCB PANEL(MD)
116	3-686-374-01	o	CUSHION,PCB
117	3-724-753-01	o	RING
118	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)



No.	Part No.	SP	Description
201	A-8274-746-A	s	DC-DC ASSY
202	A-8274-754-A	o	MOUNTED CIRCUIT BOARD, DC-70
203	A-8274-755-A	o	MOUNTED CIRCUIT BOARD, DC-71
204	X-3678-283-1	o	PLATE SHIELD ASSY,DD CON
205	1-473-208-11	s	CONVERTER UNIT, DC-DC
206	3-334-236-01	s	INSULATOR, TO-220
207	3-680-529-00	o	BUSHING, INSULATING
208	3-686-352-01	o	RUBBER,HEAT
209	3-686-360-01	o	SPACER,INSULATING
210	3-686-373-01	s	SPRING,LEAF



No.	Part No.	SP	Description
301	A-8274-752-A	o	MOUNTED CIRCUIT BOARD, RX-25
302	A-8274-753-A	o	MOUNTED CIRCUIT BOARD, FL-177
303	X-3678-280-1	o	PANEL(OUT SIDE) ASSY
304	1-426-476-12	s	FILTER, MPX
305	1-533-628-11	s	BREAKER, CIRCUIT
306	1-560-163-00	s	PLUG, RF
307	1-561-781-11	s	CONNECTOR, BNC, FEMALE
308	1-562-222-41	s	CONNECTOR, 6P, FEMALE
309	1-566-317-11	s	PLUG, RF
310	1-571-367-11	s	SWTCH, TOGGLE
311	1-652-746-11	o	PRINTED CIRCUIT BOARD, VR-191
312	1-954-674-11	o	HARNESS (RF)
313	3-175-715-02	s	SCREW, FITTING, ADAPTOR
314	3-175-715-22	s	SCREW, FITTING, ADAPTOR
315	3-685-115-01	s	CAP (6P), DROP PROTECTION
316	3-686-344-01	o	PANEL,CONNECTOR
317	3-686-354-01	o	SHILD,RX
318	3-686-358-01	o	UPPER PCB GUIDE
319	3-686-372-01	o	FL INSULATOR
320	3-687-195-01	o	CLAMP, PCB
321	3-717-823-01	s	COVER, BNC
322	3-722-486-11	s	KNOB
323	9-911-815-03	s	SPACER (D)



No.	Part No.	SP	Description
401	A-8274-765-A	o	MOUNTED CIRCUIT BOARD, SW-711
402	X-3678-281-1	o	SHASSIS ASSY
403	1-414-142-11	s	MICRO INDUCTOR
404	1-507-251-XX	s	JACK
405	1-500-082-11	s	CLAMP, SLEEVE FERRITE
406	1-563-159-11	s	CONNECTOR, 5P, FEMALE
407	1-565-801-11	s	CONNECTOR, DOUBLE COAXIAL [for UC]
	1-565-797-12	s	CONNECOTR, DOUBLE COAXIAL [for J]
	1-561-844-00	s	CONNECTOR, COAXIAL (FEMALE) [for CER]
408	1-565-908-11	s	CONNECTOR, 4P, MALE
409	1-954-673-11	o	HARNESS (TRIAX(UC)) [for UC]
	1-954-671-11	o	HARNESS (TRIAX(J)) [for J]
	1-954-672-11	o	HARNESS (TRIAX(EK)) [for CER]
410	1-954-677-11	s	HARNESS (INCOM)

No.	Part No.	SP	Description
411	2-128-242-03	o	LABEL, CCU
412	2-128-245-11	o	PLATE (XLR), PHONE
413	2-145-208-01	o	LABEL, EAR PHONE
414	2-361-598-11	o	PLATE (K) (1), CONNECTOR [for UC,J]
	2-361-586-11	o	PLATE (F) (1), CONNECTOR [for CER]
415	2-365-236-00	o	LUG (K), GROUND [for UC,J]
	2-365-265-01	o	LUG (F)(2), GROUND [for CER]
416	3-437-228-00	s	INSULATOR, JACK
417	3-437-229-01	s	INSULATOR (B), JACK
418	3-676-244-00	s	COVER, SWITCH
419	3-849-405-00	s	COVER, EARPHONE JACK

http://getMANUAL.com

6-3. Electrical Parts List

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CN-1154 BOARD
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Ref. No.
or Q'ty  Part No.    SP Description

1pc      A-8274-767-A o MOUNTED CIRCUIT BOARD, CN-1154

CN141    1-573-360-21 s CONNECTOR, FFC/FPC 20P
CN142    1-573-360-21 s CONNECTOR, FFC/FPC 20P
CN143    1-764-086-21 o CONNECTOR, PC BOARD 14P, MALE
CN144    1-764-085-21 o CONNECTOR, PC BOARD 13P, MALE
CN145    1-695-443-21 o CONNECTOR, PC BOARD 11P, MALE

FL12     1-239-896-11 s FILTER, EMI (SMD)
FL13     1-239-896-11 s FILTER, EMI (SMD)
FL14     1-239-896-11 s FILTER, EMI (SMD)
FL15     1-239-896-11 s FILTER, EMI (SMD)

R1-20    1-216-295-00 s RES, CHIP 0
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CN-1176 BOARD
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Ref. No.
or Q'ty  Part No.    SP Description

1pc      1-656-062-11 o PRINTED CIRCUIT BOARD, CN-1176

CN1      1-766-437-11 s CONNECTOR, BOARD TO BOARD 40P
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DA-89 BOARD
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Ref. No.
or Q'ty  Part No.    SP Description

1pc      A-8274-749-A o MOUNTED CIRCUIT BOARD, DA-89
1pc      3-686-357-01 o PCB PANEL(DA)
1pc      3-724-753-01 o RING
5pcs     3-729-061-01 s SCREW (M2X4.5) (TYPE 1)

C1       1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C2       1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C3       1-163-038-00 s CERAMIC 0.1uF 25V
C4       1-163-038-00 s CERAMIC 0.1uF 25V
C5       1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V

C6       1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C7       1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C8-17    1-163-038-00 s CERAMIC 0.1uF 25V
C18      1-163-263-11 s CERAMIC, CHIP 330PF 5% 50V
C19      1-163-038-00 s CERAMIC 0.1uF 25V

C20      1-163-038-00 s CERAMIC 0.1uF 25V
C21      1-163-038-00 s CERAMIC 0.1uF 25V
C22      1-163-038-00 s CERAMIC 0.1uF 25V
C23-28   1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C29      1-163-038-00 s CERAMIC 0.1uF 25V

C30      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C31      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C32      1-163-038-00 s CERAMIC 0.1uF 25V
C33      1-163-038-00 s CERAMIC 0.1uF 25V
C34      1-164-161-11 s CERAMIC, CHIP 0.0022uF 10% 100V

C35      1-164-161-11 s CERAMIC, CHIP 0.0022uF 10% 100V
C36      1-163-135-00 s CERAMIC, CHIP 560PF 5% 50V
C37      1-163-135-00 s CERAMIC, CHIP 560PF 5% 50V
C38      1-163-038-00 s CERAMIC 0.1uF 25V
C39      1-163-038-00 s CERAMIC 0.1uF 25V

C40      1-163-038-00 s CERAMIC 0.1uF 25V
C41      1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C42      1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C43      1-163-263-11 s CERAMIC, CHIP 330PF 5% 50V
C44      1-163-263-11 s CERAMIC, CHIP 330PF 5% 50V

C45-52   1-163-038-00 s CERAMIC 0.1uF 25V
C54      1-163-038-00 s CERAMIC 0.1uF 25V
C55      1-163-038-00 s CERAMIC 0.1uF 25V
C56      1-135-166-21 s TANTALUM, CHIP 47uF 10% 10V
C57      1-163-038-00 s CERAMIC 0.1uF 25V

C58      1-163-038-00 s CERAMIC 0.1uF 25V
C60      1-163-038-00 s CERAMIC 0.1uF 25V
C61      1-163-257-11 s CERAMIC, CHIP 180PF 5% 50V
C62      1-163-038-00 s CERAMIC 0.1uF 25V
C63      1-163-237-11 s CERAMIC, CHIP 27PF 5% 50V

C73      1-163-227-11 s CERAMIC, CHIP 10PF 5% 50V
C74      1-163-133-00 s CERAMIC, CHIP 470PF 5% 50V
C75      1-163-038-00 s CERAMIC 0.1uF 25V
C76      1-163-125-00 s CERAMIC, CHIP 220PF 5% 50V
C77      1-163-125-00 s CERAMIC, CHIP 220PF 5% 50V

C78      1-163-038-00 s CERAMIC 0.1uF 25V
C79      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C80      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C81      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
C84      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V

C85      1-163-243-11 s CERAMIC, CHIP 47PF 5% 50V
C86      1-163-038-00 s CERAMIC 0.1uF 25V
C87      1-135-159-21 s TANTALUM, CHIP 10uF 10% 20V
C90      1-163-251-11 s CERAMIC, CHIP 100PF 5% 50V
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(DA-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
CN1	1-695-453-11	s	CONNECTOR, BOARD TO BOARD 50P
D2	8-719-820-41	s	DIODE 1SS302
D4	8-719-820-41	s	DIODE 1SS302
D5	8-719-820-41	s	DIODE 1SS302
FL1	1-233-338-11	s	FILTER, LOW PASS
FL2	1-233-339-11	s	FILTER, LOW PASS
FL3	1-233-339-11	s	FILTER, LOW PASS
IC1	8-759-080-02	s	IC TC74VHC541FS(EL)
IC2	8-759-079-49	s	IC TC74VHC04FS(EL)
IC3	8-759-173-16	s	IC TL062CPW
IC4	8-759-173-51	s	IC SM5872AS-ET
IC5	8-752-360-44	s	IC CXK1203AR
IC6	8-752-360-44	s	IC CXK1203AR
IC7	8-759-079-61	s	IC TC74VHC74FS(EL)
IC8	8-759-079-61	s	IC TC74VHC74FS(EL)
IC9	8-759-700-84	s	IC NJM2041M-D
IC10	8-759-700-84	s	IC NJM2041M-D
IC11-15	8-759-080-06	s	IC TC74VHC574FS(EL)
IC16	8-759-079-61	s	IC TC74VHC74FS(EL)
IC17	8-759-079-49	s	IC TC74VHC04FS(EL)
IC18	8-759-700-84	s	IC NJM2041M-D
IC19	8-752-363-60	s	IC CXD2307R-T4
IC20	8-759-700-84	s	IC NJM2041M-D
IC21	8-759-050-92	s	IC SN74HC164APW-E05
IC22	8-759-050-92	s	IC SN74HC164APW-E05
IC23	8-759-079-49	s	IC TC74VHC04FS(EL)
IC24	8-752-360-44	s	IC CXK1203AR
IC25	8-759-079-49	s	IC TC74VHC04FS(EL)
IC26	8-759-079-49	s	IC TC74VHC04FS(EL)
L1	1-410-381-11	s	INDUCTOR, CHIP 10uH
L2	1-410-381-11	s	INDUCTOR, CHIP 10uH
L3	1-410-381-11	s	INDUCTOR, CHIP 10uH
L4	1-410-381-11	s	INDUCTOR, CHIP 10uH
L5	1-410-393-11	s	INDUCTOR, CHIP 100uH
L6	1-410-393-11	s	INDUCTOR, CHIP 100uH
L7	1-410-385-11	s	INDUCTOR, CHIP 22uH
L8	1-410-393-11	s	INDUCTOR, CHIP 100uH
Q1	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q2-8	8-729-102-07	s	TRANSISTOR 2SC2223-F13
Q9	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q10	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q11	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
R1-5	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R6	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R7	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R8	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R9	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R10-19	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R21	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R23	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R25	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R28	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R30	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R31	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R32	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R33	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R34	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W

(DA-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R36	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R37	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R38	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R39	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R41	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R42	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R43	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R44	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R45	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R46	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R47	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R48	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R49-54	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R55	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R56	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R57	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R58	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R62	1-216-645-11	s	METAL, CHIP 560 0.5% 1/10W
R63	1-216-645-11	s	METAL, CHIP 560 0.5% 1/10W
R64	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R65	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R66	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R70	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R71	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R72	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R74	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R75	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R76	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R77	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R79	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R80	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R81	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R82	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R83	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R84	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R85	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R86	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R87	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R88	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R89	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R90	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R91	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R92	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R93	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R94	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R96	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R97	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R98	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R99	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R100	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R101	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R105	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R107	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R108	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R109	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R110	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R111	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R113	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R117	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W

(DA-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R119	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R120	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R122	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R124	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R128	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R132	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R134	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R135	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R138	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R142	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R143	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R144	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R145	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R146	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R147	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R148	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R149	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R150	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R151	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R152	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R153	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R156	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R159	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R161	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R162	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R163	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R164	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R166	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R167	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R168	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R169	1-216-295-00	s	RES, CHIP 0
R170	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R171	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R172	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
RV1	1-237-033-11	s	RES, ADJ METAL 1K
RV2	1-237-033-11	s	RES, ADJ METAL 1K
RV3	1-237-036-11	s	RES, ADJ METAL 10K
RV4	1-237-036-11	s	RES, ADJ METAL 10K
RV5	1-237-036-11	s	RES, ADJ METAL 10K
RV6	1-237-033-11	s	RES, ADJ METAL 1K
S1	1-572-272-11	s	SWITCH, SLIDE
S2	1-572-272-11	s	SWITCH, SLIDE

DC-70 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-754-A	o	MOUNTED CIRCUIT BOARD, DC-70
1pc	3-334-236-01	s	INSULATOR, TO-220
1pc	3-680-529-00	o	BUSHING, INSULATING
1pc	3-686-352-01	o	RUBBER,HEAT
2pcs	7-621-770-87	s	SCREW +B 2.6X5
4pcs	7-621-773-86	s	SCREW +B 2.6X4
4pcs	7-688-002-03	s	W 2.6, SMALL
C1	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
C2	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
C3	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
C4	1-111-256-11	s	ELECT 47uF 20% 200V
C5	1-111-256-11	s	ELECT 47uF 20% 200V
C6	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C7	1-163-038-00	s	CERAMIC 0.1uF 25V
C11-18	1-163-038-00	s	CERAMIC 0.1uF 25V
C19	1-128-528-11	s	ELECT 470uF 20% 25V
C20	1-128-528-11	s	ELECT 470uF 20% 25V
C21	1-128-528-11	s	ELECT 470uF 20% 25V
C22	1-128-528-11	s	ELECT 470uF 20% 25V
C24	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C25	1-163-038-00	s	CERAMIC 0.1uF 25V
C27	1-128-528-11	s	ELECT 470uF 20% 25V
C28	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C29	1-163-038-00	s	CERAMIC 0.1uF 25V
C30	1-163-038-00	s	CERAMIC 0.1uF 25V
C31	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C32	1-163-038-00	s	CERAMIC 0.1uF 25V
C35	1-163-038-00	s	CERAMIC 0.1uF 25V
CN1	1-566-693-11	o	CONNECTOR, 2P, MALE
CN2	1-560-356-00	o	CONNECTOR, POST HEADER ILG 2P, MALE
CN3	1-580-562-11	o	CONNECTOR, LY 14P, MALE
CN4	1-580-531-11	o	CONNECTOR, PC BOARD 4P, MALE
CP1	1-473-208-11	s	CONVERTER UNIT, DC-DC
D1	8-719-110-73	s	DIODE RD30ESB3
D2	8-719-029-68	s	DIODE RD6.2UJN-T1
D3	8-719-110-45	s	DIODE RD16ESB2
D4	8-719-210-39	s	DIODE EC10QS04
D5	8-719-210-39	s	DIODE EC10QS04
D6	8-719-210-39	s	DIODE EC10QS04
D7	8-719-820-41	s	DIODE 1SS302
D8	8-719-110-58	s	DIODE RD22ES-B3
IC1	8-759-335-28	s	IC TA78M09F(TE16L)
IC2	8-759-335-28	s	IC TA78M09F(TE16L)
L1	1-424-643-11	s	COIL, CHOKE 10uH
LF1	1-424-135-11	s	FILTER, LINE
LF2	1-424-598-11	s	COIL, CHOKE 1mH
Q1	8-729-901-01	s	TRANSISTOR DTC144EK
Q2	8-729-105-37	s	TRANSISTOR 2SC3360
Q3	8-729-105-08	s	TRANSISTOR 2SA1330
Q4	8-729-203-81	s	TRANSISTOR 2SC2238B-O
Q5	8-729-905-18	s	TRANSISTOR DTC144EU
Q6	8-729-322-23	s	TRANSISTOR 2SJ120S
Q8	8-729-905-18	s	TRANSISTOR DTC144EU
R1	1-216-254-00	s	METAL, CHIP 220K 5% 1/8W

(DC-70 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R2	1-216-254-00	s	METAL, CHIP 220K 5% 1/8W
R3	1-216-254-00	s	METAL, CHIP 220K 5% 1/8W
R4	1-220-292-11	s	METAL, CHIP 39K 5% 1/4W
R5	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R6	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R7	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R8	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R9	1-218-477-11	s	METAL, CHIP 220 5% 1/4W
R10	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R11	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R12	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R13	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W

DC-71 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-755-A	o	MOUNTED CIRCUIT BOARD, DC-71
C1	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C3	1-135-213-21	s	TANTALUM 3.3uF 20% 25V
C4	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C5	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C6	1-163-038-00	s	CERAMIC 0.1uF 25V
C7	1-135-259-11	s	TANTALUM, CHIP 10uF 20% 6.3V
C8	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C9	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C10	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C11	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C13	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C14	1-163-038-00	s	CERAMIC 0.1uF 25V
C15	1-135-213-21	s	TANTALUM 3.3uF 20% 25V
C16	1-128-528-11	s	ELECT 470uF 20% 25V
C17	1-163-038-00	s	CERAMIC 0.1uF 25V
C18	1-163-038-00	s	CERAMIC 0.1uF 25V
C19	1-127-518-11	s	ELECT 100uF 20% 16V
C20	1-163-038-00	s	CERAMIC 0.1uF 25V
C21	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C22	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C23	1-163-038-00	s	CERAMIC 0.1uF 25V
C24	1-163-038-00	s	CERAMIC 0.1uF 25V
C25	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C26	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C27	1-163-038-00	s	CERAMIC 0.1uF 25V
C28	1-163-038-00	s	CERAMIC 0.1uF 25V
C29	1-163-038-00	s	CERAMIC 0.1uF 25V
C30	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C33	1-127-513-00	s	ALUMN SOLID 15uF 20% 25V
C34	1-163-038-00	s	CERAMIC 0.1uF 25V
C35	1-163-038-00	s	CERAMIC 0.1uF 25V
C36	1-135-165-11	s	TANTALUM 33uF 20% 16V
C37	1-135-165-11	s	TANTALUM 33uF 20% 16V
C38	1-163-038-00	s	CERAMIC 0.1uF 25V
C39	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C40	1-163-038-00	s	CERAMIC 0.1uF 25V
C41	1-135-165-11	s	TANTALUM 33uF 20% 16V
C42	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C43	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C44	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C45	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C46	1-163-038-00	s	CERAMIC 0.1uF 25V
C47	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C48	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C49	1-127-513-00	s	ALUMN SOLID 15uF 20% 25V
C50	1-163-038-00	s	CERAMIC 0.1uF 25V
C51	1-163-038-00	s	CERAMIC 0.1uF 25V
C52	1-127-518-11	s	ALUMN SOLID 100uF 20% 16V
C53	1-163-038-00	s	CERAMIC 0.1uF 25V
C54	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C55	1-163-038-00	s	CERAMIC 0.1uF 25V
C56	1-163-038-00	s	CERAMIC 0.1uF 25V
C57	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C59	1-128-528-11	s	ELECT 470uF 20% 25V
C60	1-163-038-00	s	CERAMIC 0.1uF 25V
C61	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C62	1-163-038-00	s	CERAMIC 0.1uF 25V

(DC-71 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C64	1-135-165-11	s	TANTALUM 33uF 20% 16V
C66	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C67	1-135-179-21	s	TANTALUM 2.2uF 10% 16V
C68	1-135-214-21	s	TANTALUM, CHIP 4.7uF 20% 20V
C69	1-135-165-11	s	TANTALUM 33uF 20% 16V
C70	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
CN1	1-580-564-11	o	CONNECTOR, PC BOARD 18P, MALE
CN2	1-580-531-11	o	CONNECTOR, PC BOARD 4P, MALE
D1	8-719-911-55	s	DIODE U05G
D2	8-719-029-77	s	DIODE RD15UJN-T1
D3	8-719-029-68	s	DIODE RD6.2UJN-T1
D4	8-719-024-81	s	DIODE 1SS300-TE85L
D5	8-719-024-81	s	DIODE 1SS300-TE85L
D6	8-719-820-41	s	DIODE 1SS302
D7	8-719-210-39	s	DIODE EC10QS04
D8	8-719-820-41	s	DIODE 1SS302
D9	8-719-210-39	s	DIODE EC10QS04
D10	8-719-948-47	s	DIODE HSM88AS
D11	8-719-404-35	s	DIODE MA141WK
D12	8-719-974-76	s	DIODE HSM107S
D13	8-719-404-35	s	DIODE MA141WK
D14	8-719-948-47	s	DIODE HSM88AS
D15	8-719-404-35	s	DIODE MA141WK
D16	8-719-820-41	s	DIODE 1SS302
D17	8-719-210-39	s	DIODE EC10QS04
D18	8-719-404-35	s	DIODE MA141WK
D19	8-719-024-81	s	DIODE 1SS300-TE85L
D20	8-719-404-35	s	DIODE MA141WK
D21	8-719-024-81	s	DIODE 1SS300-TE85L
D22	8-719-404-35	s	DIODE MA141WK
D25	8-719-210-39	s	DIODE EC10QS04
FB1	1-543-469-11	s	BEAD, FERRITE (CHIP)
FB2	1-543-469-11	s	BEAD, FERRITE (CHIP)
FB3	1-543-469-11	s	BEAD, FERRITE (CHIP)
IC1	8-759-260-55	s	IC TLC272CPW-E05
IC2	8-759-066-68	s	IC REF-03GS
IC3	8-759-094-19	s	IC TL1455CDB
IC4	8-759-076-06	s	IC TL064CPW
IC5	8-759-981-48	s	IC NJM082M
IC6	8-759-067-37	s	IC TLC277CPS
L1	1-410-283-11	s	INDUCTOR (WITH CORE) 48uH
L2	1-409-721-11	s	COIL, CHOKE 42uH
L3	1-411-323-11	s	COIL,CHOKE 74uH
L4	1-410-284-11	s	INDUCTOR (WITH CORE) 10uH
L5	1-411-323-11	s	COIL,CHOKE 74uH
L6	1-410-284-11	s	INDUCTOR (WITH CORE) 10uH
L7	1-410-284-11	s	INDUCTOR (WITH CORE) 10uH
Q1	8-729-141-75	s	TRANSISTOR 2SD596DV345
Q2	8-729-905-18	s	TRANSISTOR DTC144EU
Q3	8-729-905-12	s	TRANSISTOR DTA144EU
Q4	8-729-905-18	s	TRANSISTOR DTC144EU
Q5	8-729-905-12	s	TRANSISTOR DTA144EU
Q6	8-729-117-32	s	TRANSISTOR 2SC4177
Q7	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q8	8-729-322-23	s	TRANSISTOR 2SJ120S
Q9	8-729-101-07	s	TRANSISTOR 2SB798

(DC-71 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
Q10	8-729-117-32	s	TRANSISTOR 2SC4177
Q11	8-729-016-29	s	TRANSISTOR 2SA1244LB
Q12	8-729-117-32	s	TRANSISTOR 2SC4177
Q13	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q14	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q15	8-729-117-32	s	TRANSISTOR 2SC4177
Q16	8-729-322-23	s	TRANSISTOR 2SJ120S
Q17	8-729-905-12	s	TRANSISTOR DTA144EU
Q18	8-729-905-18	s	TRANSISTOR DTC144EU
Q19	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q20	8-729-205-88	s	TRANSISTOR 2SC3074-Y
Q21	8-729-905-18	s	TRANSISTOR DTC144EU
Q22	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q24	8-729-905-12	s	TRANSISTOR DTA144EU
Q26	8-729-117-32	s	TRANSISTOR 2SC4177
Q27	8-729-140-63	s	TRANSISTOR 2SA1611-M5M6
Q28	8-729-322-23	s	TRANSISTOR 2SJ120S
Q29	8-729-016-29	s	TRANSISTOR 2SA1244LB
Q30	8-729-117-32	s	TRANSISTOR 2SC4177
Q31	8-729-905-18	s	TRANSISTOR DTC144EU
Q32	8-729-029-14	s	TRANSISTOR DTC144EUA-T106
Q33	8-729-905-18	s	TRANSISTOR DTC144EU
Q34	8-729-905-12	s	TRANSISTOR DTA144EU
Q35	8-729-117-32	s	TRANSISTOR 2SC4177
Q36	8-729-117-32	s	TRANSISTOR 2SC4177
Q37	8-729-905-12	s	TRANSISTOR DTA144EU
R1	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R2	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R3	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R4	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R5	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R6	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R7	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R8	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R9	1-216-698-11	s	METAL, CHIP 91K 0.5% 1/10W
R10	1-216-698-11	s	METAL, CHIP 91K 0.5% 1/10W
R11	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R12	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R13	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R14	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R15	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R16	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R17	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R18	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R19	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R20	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R21	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R22	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R23	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R24	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R25	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R26	1-216-295-00	s	RES, CHIP 0
R27	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R28	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R29	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R30	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R31	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R32	1-216-295-00	s	RES, CHIP 0

(DC-71 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R33	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R34	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R35	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R36	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R37	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R38	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R39	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R40	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R41	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R42	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R43	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R52	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R53	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R54	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R55	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R56	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R57	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R58	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R59	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R60	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R61	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R62	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R63	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R64	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R65	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R66	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R67	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R68	1-216-697-11	s	METAL, CHIP 82K 0.50% 1/10W
R69	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R70	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R71	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R72	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R73	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R74	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R75	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R76	1-216-649-11	s	METAL, CHIP 820 0.5% 1/10W
R77	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R78	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R79	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R83	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R84	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R85	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R86	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R87	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R88	1-208-824-11	s	METAL, CHIP 56K 0.50% 1/10W
R89	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R90	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R91	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R92	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R93	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R94	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R95	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R96	1-208-854-11	s	METAL, CHIP 1M 0.50% 1/10W
R97	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R98	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R99	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
RV1	1-241-260-11	s	RES, ADJ, CERMET 500

FL-177 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-753-A	o	MOUNTED CIRCUIT BOARD, FL-177
2pcs	7-621-773-86	s	SCREW +B 2.6X4
C1	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
C2	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
C4	1-104-504-11	s	CERAMIC 0.033uF 10% 500V
CN111	1-564-214-11	o	CONNECTOR, B3PS-VH 3P, MALE
CN112	1-566-693-11	o	CONNECTOR, 2P, MALE
CN113	1-561-310-00	s	CONNECTOR, COAXIAL, MALE
L1	1-408-142-21	s	MICRO INDUCTOR 22.5MMH
L2	1-410-283-11	s	INDUCTOR (WITH CORE) 48uH
L3	1-410-283-11	s	INDUCTOR (WITH CORE) 48uH
L4	1-410-283-11	s	INDUCTOR (WITH CORE) 48uH
L5	1-412-179-11	s	INDUCTOR 3.3uH
L6	1-412-191-11	s	INDUCTOR 47uH

IF-501 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-747-A	o	MOUNTED CIRCUIT BOARD, IF-501
1pc	3-686-356-01	o	PCB PANEL(IF)
1pc	3-724-753-01	o	RING
5pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C2	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C3	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C4	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C5	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C6	1-164-816-11	s	CERAMIC, CHIP 220PF 2% 50V
C7	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C8	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C9	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C10	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C11	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C12	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C13	1-128-397-21	s	ELECT 100uF 20% 16V
C14	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C15	1-164-363-11	s	CERAMIC, CHIP 560PF 5% 50V
C16	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C17	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C18	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C19	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C20	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C21	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C22	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C23	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C24	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C25	1-162-962-11	s	CERAMIC, CHIP 470PF 10% 50V
C26-30	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C31	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C32	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C33	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C34	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C35	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C36	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C37	1-162-923-11	s	CERAMIC, CHIP 47PF 5% 50V
C38	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C39	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C40	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C123	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C124	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C125	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C126	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C127	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C128	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C129	1-162-905-11	s	CERAMIC, CHIP 1PF 50V
C130	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C131	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C132	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C133	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C134	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C135	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C136	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C137	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C138	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C139	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C140	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C142	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V

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Ref. No. or Q'ty	Part No.	SP	Description
C143	1-162-957-11	s	CERAMIC, CHIP 220PF 5% 50V
C144	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C145	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C146	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C147-151	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C152	1-162-995-11	s	CERAMIC, CHIP 0.022uF 50V
C153	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C154	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C155	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C156	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C157	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C158	1-162-922-11	s	CERAMIC, CHIP 39PF 5% 50V
C161	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C162	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C163	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C164	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C165	1-135-166-21	s	TANTALUM, CHIP 47uF 10% 10V
C166	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C167	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C168	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C169	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C170	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C171	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C172	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C173	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C174	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C175	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C176	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C177	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C178	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C179	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C181	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C182	1-162-970-11	s	CERAMIC, CHIP 0.01uF 10% 25V
C183	1-162-995-11	s	CERAMIC, CHIP 0.022uF 50V
C184	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C185	1-164-361-11	s	CERAMIC, CHIP 0.047uF 16V
CN1	1-695-453-11	s	CONNECTOR, BOARD TO BOARD 50P
CNI1	1-540-151-21	s	SOCKET, IC
D1	8-719-800-76	s	DIODE 1SS226
D2	8-719-800-76	s	DIODE 1SS226
D3	8-719-800-76	s	DIODE 1SS226
D4	8-719-800-76	s	DIODE 1SS226
D5	8-719-948-47	s	DIODE HSM88AS
D6	8-719-800-76	s	DIODE 1SS226
D7	8-719-157-23	s	DIODE RD4.7M-B
D8	8-719-800-76	s	DIODE 1SS226
D9	8-719-801-78	s	DIODE 1SS184
D10	8-719-800-76	s	DIODE 1SS226
D11	8-719-104-34	s	DIODE 1S2835
D12	8-719-104-34	s	DIODE 1S2835
D13	8-719-104-34	s	DIODE 1S2835
D14-18	8-719-800-76	s	DIODE 1SS226
D19	8-719-801-78	s	DIODE 1SS184
D20	8-719-002-81	s	DIODE 1T363A
D21	8-719-002-81	s	DIODE 1T363A
D22	8-719-948-47	s	DIODE HSM88AS
D23	8-719-820-41	s	DIODE 1SS302

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Ref. No. or Q'ty	Part No.	SP	Description
IC1	8-759-341-82	o	IC NM27C512V-IF501V1.00
IC2	8-759-323-88	s	IC HD6435328RA00F
IC3	8-759-507-85	s	IC MS62256CLL-10FC
IC4	8-759-918-65	s	IC TL7700CPS
IC5	8-759-049-60	s	IC SN74HC08APW-E05
IC6	8-759-082-61	s	IC TC4W53FU
IC7	8-759-049-55	s	IC SN74HC00APW-E20
IC8	8-759-928-09	s	IC TLC27M2CPS
IC9	8-759-009-51	s	IC MC14538BF
IC10	8-759-013-92	s	IC MC74HC164F
IC11	8-759-231-30	s	IC TC-4S30F
IC12	8-759-049-60	s	IC SN74HC08APW-E05
IC13	8-759-209-57	s	IC TC4S69F
IC14	8-759-082-61	s	IC TC4W53FU
IC15	8-759-049-59	s	IC SN74HC04APW-E20
IC16	8-759-635-27	s	IC M62352GP
IC17	8-759-066-59	s	IC TC74HC4053AFS
IC18	8-759-245-42	s	IC TC4S584FEL
IC19	8-759-245-42	s	IC TC4S584FEL
IC20	8-759-049-59	s	IC SN74HC04APW-E20
IC21	8-759-049-60	s	IC SN74HC08APW-E05
IC22	8-759-049-56	s	IC SN74HC02APW-E05
IC23	8-759-049-55	s	IC SN74HC00APW-E20
IC24	8-759-049-98	s	IC SN74HC74APW-E05
IC25	8-759-049-98	s	IC SN74HC74APW-E05
IC26	8-759-049-60	s	IC SN74HC08APW-E05
IC27	8-759-082-61	s	IC TC4W53FU
IC28	8-759-335-29	s	IC MAX942CSA
IC29	8-759-049-96	s	IC SN74HC32APW-E05
IC30	8-759-054-61	s	IC CLC505AJE
IC31	8-759-089-61	s	IC TC74HC4052AFS(EL)
IC32	8-759-054-61	s	IC CLC505AJE
IC33	8-759-049-59	s	IC SN74HC04APW-E20
IC34	8-759-082-61	s	IC TC4W53FU
IC35	8-759-009-51	s	IC MC14538BF
IC36	8-759-049-60	s	IC SN74HC08APW-E05
IC37	8-759-009-02	s	IC MC14046BF
IC38	8-759-009-51	s	IC MC14538BF
IC39	8-759-049-98	s	IC SN74HC74APW-E05
IC40	8-759-050-10	s	IC SN74HC163APW-E05
IC41	8-759-050-10	s	IC SN74HC163APW-E05
IC44	8-759-944-79	s	IC CXD1132Q
IC45	8-759-141-20	s	IC CXD1133Q-321
IC46	8-759-926-18	s	IC SN74HC157ANS
IC47	8-759-927-29	s	IC SN74HCU04NS
IC48	8-759-711-50	s	IC NJU7022M
IC49	8-759-031-84	s	IC TC7S04F
IC50	8-759-234-77	s	IC TC4S66F
L1	1-410-381-11	s	INDUCTOR, CHIP 10uH
L2	1-410-381-11	s	INDUCTOR, CHIP 10uH
L3	1-410-381-11	s	INDUCTOR, CHIP 10uH
L4	1-410-381-11	s	INDUCTOR, CHIP 10uH
L5	1-410-389-31	s	INDUCTOR CHIP 47uH
L6	1-410-381-11	s	INDUCTOR, CHIP 10uH
Q1	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q2	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q3	8-729-216-22	s	TRANSISTOR 2SA1162

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Ref. No. or Q'ty	Part No.	SP	Description
Q4	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q5	8-729-216-22	s	TRANSISTOR 2SA1162
Q6	8-729-216-22	s	TRANSISTOR 2SA1162
Q7	8-729-216-22	s	TRANSISTOR 2SA1162
Q8	8-729-905-18	s	TRANSISTOR DTC144EU
Q9	8-729-216-22	s	TRANSISTOR 2SA1162
Q10	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q11	8-729-216-22	s	TRANSISTOR 2SA1162
Q12	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q13	8-729-216-22	s	TRANSISTOR 2SA1162
Q14	8-729-905-18	s	TRANSISTOR DTC144EU
Q15	8-729-216-22	s	TRANSISTOR 2SA1162
Q16	8-729-905-18	s	TRANSISTOR DTC144EU
Q17	8-729-905-18	s	TRANSISTOR DTC144EU
Q18	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q19	8-729-022-33	s	TRANSISTOR 2SJ244JY-TL
Q20	8-729-905-18	s	TRANSISTOR DTC144EU
Q21	8-729-905-12	s	TRANSISTOR DTA144EU
Q22	8-729-905-18	s	TRANSISTOR DTC144EU
Q23	8-729-109-44	s	TRANSISTOR 2SK94
Q24	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q25	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q26	8-729-122-63	s	TRANSISTOR 2SA1226
Q27	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q28	8-729-122-63	s	TRANSISTOR 2SA1226
Q29	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q30	8-729-122-63	s	TRANSISTOR 2SA1226
Q31	8-729-122-63	s	TRANSISTOR 2SA1226
Q32	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q33	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q34	8-729-117-73	s	TRANSISTOR 2SC4178-F14
Q35	8-729-905-18	s	TRANSISTOR DTC144EU
R1	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R2	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R3	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R4	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R5	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R6	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R7	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R8	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R9	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R10	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R11	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R12	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R13	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R14	1-218-722-11	s	METAL, CHIP 18K 0.50% 1/16W
R15	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R16	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R17	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R18	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R19	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R20	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R21	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R22	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R23	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R24	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R25	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R26	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R27	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R28	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R29	1-218-684-11	s	METAL, CHIP 470 0.50% 1/16W
R30	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R31	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R32	1-218-724-11	s	METAL, CHIP 22K 0.50% 1/16W
R33	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R34	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R35	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R36	1-218-738-11	s	METAL, CHIP 82K 0.5% 1/16W
R37	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R38	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R39	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R40	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R41	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R42	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R43	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R44	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R45	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R46-53	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R54-59	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R60	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R61	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R62	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R63	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R64	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R65	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R66	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R67	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R68	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R69	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R70	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R71	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R72	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R73	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R74	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R75	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R76	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R77	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R78	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R79	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R80	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R81	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R82	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R83	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R84	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R85	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R86	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R87	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R89	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R90	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R91	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R92	1-211-990-11	s	METAL, CHIP 75 0.50% 1/16W
R93	1-211-990-11	s	METAL, CHIP 75 0.50% 1/16W
R94	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R95	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R96	1-218-724-11	s	METAL, CHIP 22K 0.50% 1/16W
R97	1-218-736-11	s	METAL, CHIP 68K 0.50% 1/16W
R98	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R99	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R100	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R101	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R102	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R103	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R104	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R105-109	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R110	1-216-853-11	s	METAL, CHIP 470K 5% 1/16W
R111	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R112	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R113	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R114	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R115	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R116	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R117	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R118	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R119	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R120	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R121	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R122	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R123	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R124	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R125	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R126	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R127	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R128	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R129	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R130	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R131	1-218-688-11	s	METAL, CHIP 680 0.50% 1/16W
R133	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R134	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R135	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R136	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R137	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R138	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R139	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R140	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R141	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R142	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R143	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R144	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R145	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R146	1-218-883-11	s	METAL, CHIP 33K 0.50% 1/16W
R148	1-218-730-11	s	METAL, CHIP 39K 0.50% 1/16W
R149	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R150	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R152	1-218-740-11	s	METAL, CHIP 100K 0.50% 1/16W
R153	1-218-724-11	s	METAL, CHIP 22K 0.50% 1/16W
R154	1-218-724-11	s	METAL, CHIP 22K 0.50% 1/16W
R155	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R156	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R157	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R158	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R159	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R160	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R161	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R163	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R164	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R165	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W

(IF-501 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R166	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R167	1-218-881-11	s	METAL, CHIP 27K 0.50% 1/16W
R168	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R169	1-218-899-11	s	METAL, CHIP 150K 0.50% 1/16W
R170	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R171	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R172	1-218-732-11	s	METAL, CHIP 47K 0.50% 1/16W
R173	1-218-736-11	s	METAL, CHIP 68K 0.50% 1/16W
R174	1-218-752-11	s	METAL, CHIP 330K 0.50% 1/16W
R175	1-218-748-11	s	METAL, CHIP 220K 0.50% 1/16W
R176	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R177	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R178	1-216-853-11	s	METAL, CHIP 470K 5% 1/16W
R179	1-218-899-11	s	METAL, CHIP 150K 0.50% 1/16W
R180	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
S1	1-692-270-21	s	SWITCH, SLIDE
S2	1-692-270-21	s	SWITCH, SLIDE
S3	1-572-272-11	s	SWITCH, SLIDE
S4	1-692-270-21	s	SWITCH, SLIDE
X1	1-760-273-11	s	CRYSTAL 20.000000MHz
X2	1-567-866-11	s	CRYSTAL, 14.31818MHz
X3	1-567-867-11	s	CRYSTAL, 14.500MHz
X4	1-567-812-11	s	RESONATOR, CERAMIC 12.288MHz

MB-590 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-751-A	o	MOUNTED CIRCUIT BOARD, MB-590
8pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C4	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
CN1	1-691-845-11	o	CONNECTOR, BOARD TO BOARD 50P
CN2	1-691-845-11	o	CONNECTOR, BOARD TO BOARD 50P
CN3	1-691-845-11	o	CONNECTOR, BOARD TO BOARD 50P
CN4	1-691-845-11	o	CONNECTOR, BOARD TO BOARD 50P
CN5	1-569-170-11	s	CONNECTOR, COAXIAL, MALE
CN6	1-569-170-11	s	CONNECTOR, COAXIAL, MALE
CN7	1-569-170-11	s	CONNECTOR, COAXIAL, MALE
CN8	1-764-086-21	o	CONNECTOR, PC BOARD 14P, MALE
CN9	1-764-085-21	o	CONNECTOR, PC BOARD 13P, MALE
CN10	1-695-440-21	s	CONNECTOR, PC BOARD 6P, MALE
CN11	1-764-084-21	o	CONNECTOR, PC BOARD 8P, MALE
CN12	1-695-442-21	o	CONNECTOR, PC BOARD 10P, MALE
CN13	1-691-741-21	o	CONNECTOR, PC BOARD 2P, MALE
CN14	1-580-538-11	o	CONNECTOR, LY 18P, MALE
CN15	1-691-742-11	s	CONNECTOR, PC BOARD 4P, MALE
CN16	1-695-441-21	o	CONNECTOR, PC BOARD 7P, MALE
CN17	1-764-084-21	o	CONNECTOR, PC BOARD 8P, MALE
CN18	1-695-443-21	o	CONNECTOR, PC BOARD 11P, MALE
CN19	1-580-558-11	o	CONNECTOR, PC BOARD 6P, MALE
CN21	1-695-442-21	o	CONNECTOR, PC BOARD 10P, MALE
CN22	1-580-558-11	o	CONNECTOR, PC BOARD 6P, MALE
CN23	1-580-534-11	o	CONNECTOR, LY 10P, MALE
FB1-5	1-543-469-11	s	BEAD, FERRITE (CHIP)
R1	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W

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MD-102 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-750-A	o	MOUNTED CIRCUIT BOARD, MD-102
1pc	3-686-369-01	o	PCB PANEL(MD)
1pc	3-724-753-01	o	RING
5pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C2	1-163-038-00	s	CERAMIC 0.1uF 25V
C3	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C4	1-163-038-00	s	CERAMIC 0.1uF 25V
C5	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C6	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C7	1-163-038-00	s	CERAMIC 0.1uF 25V
C8	1-163-038-00	s	CERAMIC 0.1uF 25V
C9	1-163-038-00	s	CERAMIC 0.1uF 25V
C10	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C11	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C12	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C13	1-104-563-11	s	FILM, CHIP 0.1uF 5% 16V
C14	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C15	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C16	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C17	1-163-038-00	s	CERAMIC 0.1uF 25V
C18	1-163-038-00	s	CERAMIC 0.1uF 25V
C19	1-163-038-00	s	CERAMIC 0.1uF 25V
C20	1-104-563-11	s	FILM, CHIP 0.1uF 5% 16V
C21	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C22	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C23	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C24	1-163-038-00	s	CERAMIC 0.1uF 25V
C25	1-163-038-00	s	CERAMIC 0.1uF 25V
C26	1-163-038-00	s	CERAMIC 0.1uF 25V
C27	1-104-563-11	s	FILM, CHIP 0.1uF 5% 16V
C28	1-104-563-11	s	FILM, CHIP 0.1uF 5% 16V
C29	1-163-038-00	s	CERAMIC 0.1uF 25V
C30	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C31	1-163-038-00	s	CERAMIC 0.1uF 25V
C32	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C33	1-163-038-00	s	CERAMIC 0.1uF 25V
C34	1-163-038-00	s	CERAMIC 0.1uF 25V
C35	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C36	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C37	1-163-038-00	s	CERAMIC 0.1uF 25V
C38	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C39	1-163-038-00	s	CERAMIC 0.1uF 25V
C40	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C41	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C42	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C43	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C44	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C45	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C46	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C47	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C48	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C50	1-163-038-00	s	CERAMIC 0.1uF 25V
C51	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C52	1-163-241-11	s	CERAMIC, CHIP 39PF 5% 50V
C53	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C65	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C66	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C67	1-135-160-21	s	TANTALUM 15uF 20% 16V

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Ref. No. or Q'ty	Part No.	SP	Description
C68	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C69	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C70	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C71	1-163-038-00	s	CERAMIC 0.1uF 25V
C72	1-163-220-11	s	CERAMIC, CHIP 3PF 50V
C73	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C74	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C75	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C76	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C77	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C78	1-163-217-11	s	CERAMIC, CHIP 1PF 50V
C79	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C80	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C81	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C82	1-135-160-21	s	TANTALUM 15uF 20% 16V
C83	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C84-88	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C89	1-163-220-11	s	CERAMIC, CHIP 3PF 50V
C90	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C91	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C93	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C94	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C95	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C96	1-163-217-11	s	CERAMIC, CHIP 1PF 50V
C97	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C98	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C99	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C100	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C101	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C102	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C103	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C104	1-163-241-11	s	CERAMIC, CHIP 39PF 5% 50V
C105	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C106	1-163-038-00	s	CERAMIC 0.1uF 25V
C107	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C108	1-163-135-00	s	CERAMIC, CHIP 560PF 5% 50V
C109	1-163-135-00	s	CERAMIC, CHIP 560PF 5% 50V
C110	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C111	1-135-160-21	s	TANTALUM 15uF 20% 16V
C112	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C113	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C114	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C116	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C117	1-135-145-11	s	TANTALUM, CHIP 0.47uF 10% 35V
C118	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C119	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C120	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C121	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C122	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C137	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C138	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C139	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C140	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C141	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C142	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C143	1-163-038-00	s	CERAMIC 0.1uF 25V
C144	1-163-038-00	s	CERAMIC 0.1uF 25V
C145	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C146	1-163-085-00	s	CERAMIC, CHIP 2PF 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C147	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C148	1-163-220-11	s	CERAMIC, CHIP 3PF 50V
C149-153	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C154	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
C155	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C156	1-163-220-11	s	CERAMIC, CHIP 3PF 50V
C157	1-163-241-11	s	CERAMIC, CHIP 39PF 5% 50V
C158	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C159	1-163-085-00	s	CERAMIC, CHIP 2PF 50V
CN1	1-695-453-11	s	CONNECTOR, BOARD TO BOARD 50P
D1	8-719-800-76	s	DIODE 1SS226
D2	8-719-800-76	s	DIODE 1SS226
D3	8-719-029-57	s	DIODE RD2.4UH-T1
D4	8-719-800-76	s	DIODE 1SS226
FL1	1-239-945-11	s	FILTER, LOW PASS
FL2	1-239-948-11	s	FILTER, LOW PASS (VIDEO)
FL3	1-239-943-11	s	FILTER, LOW PASS
FL4	1-233-363-11	s	FILTER, LOW PASS
FL5	1-409-824-11	s	PHASE SHIFTER
FL6	1-233-363-11	s	FILTER, LOW PASS
IC1	8-759-076-06	s	IC TL064CPW
IC2	8-759-011-65	s	IC MC74HC4053F
IC3	8-759-929-21	s	IC TLC27L2CPS
IC4	8-759-925-74	s	IC SN74HC04ANS
IC5	8-759-186-39	s	IC TC74VHC74F
IC8	8-759-700-95	s	IC NJM1496M
IC9	8-759-054-61	s	IC CLC505AJE
IC10	8-759-700-95	s	IC NJM1496M
IC11	8-759-054-61	s	IC CLC505AJE
IC12	8-759-925-74	s	IC SN74HC04ANS
IC13	8-759-234-20	s	IC TC7S08F
IC14	8-759-009-51	s	IC MC14538BF
IC15	8-759-926-24	s	IC SN74HC164ANS
IC16	8-759-926-24	s	IC SN74HC164ANS
IC17	8-759-049-55	s	IC SN74HC00APW-E20
IC18	8-759-700-95	s	IC NJM1496M
L1-5	1-410-385-11	s	INDUCTOR, CHIP 22uH
L8-14	1-410-385-11	s	INDUCTOR, CHIP 22uH
LV1	1-409-818-11	s	COIL, VAR 0.12uH
LV2	1-409-818-11	s	COIL, VAR 0.12uH
Q1	8-729-122-63	s	TRANSISTOR 2SA1226
Q2	8-729-122-63	s	TRANSISTOR 2SA1226
Q3	8-729-122-63	s	TRANSISTOR 2SA1226
Q4	8-729-122-63	s	TRANSISTOR 2SA1226
Q5	8-729-102-07	s	TRANSISTOR 2SC2223-F13
Q6-16	8-729-122-63	s	TRANSISTOR 2SA1226
Q17	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q18	8-729-102-07	s	TRANSISTOR 2SC2223-F13
Q19	8-729-102-07	s	TRANSISTOR 2SC2223-F13
Q20	8-729-102-07	s	TRANSISTOR 2SC2223-F13
Q21	8-729-102-07	s	TRANSISTOR 2SC2223-F13
R1	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R2	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R3	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R4	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R5	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R6	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R7	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R8	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R9	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R10	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R11	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R12	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R13	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R14	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R15	1-208-810-11	s	METAL, CHIP 15K 0.50% 1/10W
R16	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R17	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R18	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R19	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R20	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R21	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R22	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R23	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R24	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R25	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R26	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R27	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R28	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R29	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R30	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R31	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R32	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R33	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R34	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R35	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R36	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R37	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R38	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R39	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R40	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R41	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R42	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R43	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R44	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R45	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R46	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R47	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R48	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R49	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R50	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R51	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R52	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R53	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R54	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R55	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R56	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R57	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R58	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R59	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R60	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R61	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R63	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R64	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R66	1-216-645-11	s	METAL, CHIP 560 0.5% 1/10W
R67	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R68	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R69	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R70	1-208-800-11	s	METAL, CHIP 5.6K 0.50% 1/10W
R71	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R72	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R73	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R74	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R75	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R76	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R93	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R94	1-208-800-11	s	METAL, CHIP 5.6K 0.50% 1/10W
R95	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R96	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R97	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R98	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R99	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R100	1-216-637-11	s	METAL, CHIP 270 0.5% 1/10W
R101	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R102	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R103	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R104	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R105	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R106	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R107	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R108	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R109	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R110	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R111	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R112	1-216-623-11	s	METAL, CHIP 68 0.5% 1/10W
R113	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R114	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R115	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R116	1-216-697-11	s	METAL, CHIP 82K 0.50% 1/10W
R117	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R118	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R119	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R120	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R121	1-208-800-11	s	METAL, CHIP 5.6K 0.50% 1/10W
R122	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R123	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R124	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R125	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R126	1-216-655-11	s	METAL, CHIP 1.5K 0.5% 1/10W
R127	1-216-637-11	s	METAL, CHIP 270 0.5% 1/10W
R128	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R129	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R130	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R131	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R132	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R133	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R134	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R135	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R136	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R137	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R138	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R139	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R140	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R153	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R154	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R155	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R156	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R157	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R158	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R159	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R160	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R161	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R162	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R163	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R164	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R165	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R166	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R167	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R168	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R169	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R170	1-216-623-11	s	METAL, CHIP 68 0.5% 1/10W
R171	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R172	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
RV1	1-237-035-11	s	RES, ADJ METAL 5K
RV2	1-237-035-11	s	RES, ADJ METAL 5K
RV3	1-237-035-11	s	RES, ADJ METAL 5K
RV4	1-237-036-11	s	RES, ADJ METAL 10K
RV5	1-237-039-11	s	RES, ADJ METAL 100K
RV6	1-237-036-11	s	RES, ADJ METAL 10K
RV7	1-237-039-11	s	RES, ADJ METAL 100K
RV8	1-237-036-11	s	RES, ADJ METAL 10K
RV9	1-237-033-11	s	RES, ADJ METAL 1K
RV10	1-237-036-11	s	RES, ADJ METAL 10K
RV11	1-237-037-11	s	RES, ADJ METAL 20K
RV12	1-237-036-11	s	RES, ADJ METAL 10K
S1	1-572-272-11	s	SWITCH, SLIDE
S2	1-572-272-11	s	SWITCH, SLIDE
S3	1-692-530-11	s	SWITCH, TOGGLE
X1	1-579-715-11	s	VCO, CRYSTAL 36.000000MHz

RX-25 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-752-A	o	MOUNTED CIRCUIT BOARD, RX-25
C1	1-135-179-21	s	TANTALUM 2.2uF 10% 16V
C2	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C3	1-135-160-21	s	TANTALUM 15uF 20% 16V
C4	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C5	1-135-179-21	s	TANTALUM 2.2uF 10% 16V
C6	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C7	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C8	1-135-161-21	s	TANTALUM, CHIP 22uF 10% 10V
C9	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C10	1-163-217-11	s	CERAMIC, CHIP 1PF 50V
C11	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C12	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C13	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C14	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C15	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C16	1-135-179-21	s	TANTALUM 2.2uF 10% 16V
C17	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C18	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C19	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C20	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C21	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C22	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C23	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C24	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C25	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C26	1-162-964-11	s	CERAMIC, CHIP 0.001uF 10% 50V
C27	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C28	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C29	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C30	1-135-160-21	s	TANTALUM 15uF 20% 16V
C31	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C32	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C33	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C34	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C35	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C36	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C37	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C38	1-162-915-11	s	CERAMIC, CHIP 10PF 50V
C39	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C40	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C41	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C43	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C44	1-135-160-21	s	TANTALUM 15uF 20% 16V
C45	1-162-974-11	s	CERAMIC, CHIP 0.01uF 50V
C46	1-162-910-11	s	CERAMIC, CHIP 5PF 50V
C47	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C48	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C49	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
C50	1-164-156-11	s	CERAMIC, CHIP 0.1uF 25V
CN1	1-569-170-11	s	CONNECTOR, COAXIAL, MALE
CN2	1-695-442-21	o	CONNECTOR, PC BOARD 10P, MALE
D1	8-719-002-81	s	DIODE 1T363A
D2	8-719-002-81	s	DIODE 1T363A
D3	8-719-002-81	s	DIODE 1T363A
D4	8-719-002-81	s	DIODE 1T363A
D5	8-719-820-41	s	DIODE 1SS302

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Ref. No. or Q'ty	Part No.	SP	Description
D6	8-719-820-41	s	DIODE 1SS302
D7	8-719-948-47	s	DIODE HSM88AS
D8	8-719-820-41	s	DIODE 1SS302
FL1	1-233-274-11	s	FILTER, BAND PASS 70MHz
FL2	1-233-362-11	s	FILTER, LOW PASS
IC1	8-759-266-17	s	IC CA3102M
IC2	8-752-061-82	s	IC CXA1165AM-T4
L1	1-410-385-11	s	INDUCTOR, CHIP 22uH
L2	1-410-385-11	s	INDUCTOR, CHIP 22uH
L3	1-410-385-11	s	INDUCTOR, CHIP 22uH
L4	1-410-385-11	s	INDUCTOR, CHIP 22uH
L5	1-412-179-11	s	INDUCTOR 3.3uH
L6	1-410-385-11	s	INDUCTOR, CHIP 22uH
L7	1-410-369-11	s	INDUCTOR CHIP 1uH
L8	1-410-385-11	s	INDUCTOR, CHIP 22uH
LV1	1-409-819-11	s	COIL, VAR 0.6uH
LV2	1-409-817-11	s	COIL, VAR 0.2uH
Q1	8-729-119-28	s	TRANSISTOR 2SC2758-U18
Q2	8-729-119-28	s	TRANSISTOR 2SC2758-U18
Q3	8-729-119-28	s	TRANSISTOR 2SC2758-U18
Q4-9	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q10	8-729-122-63	s	TRANSISTOR 2SA1226
Q11	8-729-122-63	s	TRANSISTOR 2SA1226
Q12	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q13	8-729-102-08	s	TRANSISTOR 2SC2223-T1F14
Q14	8-729-122-63	s	TRANSISTOR 2SA1226
R1	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R2	1-218-664-11	s	METAL, CHIP 68 0.50% 1/16W
R3	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R5	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R6	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R7	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R8	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R9	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R10	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R11	1-218-660-11	s	METAL, CHIP 47 0.50% 1/16W
R12	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R13	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R14	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R15	1-211-981-11	s	METAL, CHIP 33 0.50% 1/16W
R16	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R17	1-218-873-11	s	METAL, CHIP 12K 0.50% 1/16W
R18	1-218-660-11	s	METAL, CHIP 47 0.50% 1/16W
R19	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R20	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R21	1-218-700-11	s	METAL, CHIP 2.2K 0.50% 1/16W
R22	1-218-688-11	s	METAL, CHIP 680 0.50% 1/16W
R23	1-218-867-11	s	METAL, CHIP 6.8K 0.50% 1/16W
R24	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R25	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R26	1-218-702-11	s	METAL, CHIP 2.7K 0.50% 1/16W
R27	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R28	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R29	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R30	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R31	1-218-707-11	s	METAL, CHIP 4.3K 0.50% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R32	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R33	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R34	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R35	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R36	1-218-842-11	s	METAL, CHIP 620 0.50% 1/16W
R37	1-218-707-11	s	METAL, CHIP 4.3K 0.50% 1/16W
R38	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R39	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R40	1-218-680-11	s	METAL, CHIP 330 0.50% 1/16W
R41	1-211-983-11	s	METAL, CHIP 39 0.50% 1/16W
R42	1-211-983-11	s	METAL, CHIP 39 0.50% 1/16W
R43	1-211-983-11	s	METAL, CHIP 39 0.50% 1/16W
R44	1-211-983-11	s	METAL, CHIP 39 0.50% 1/16W
R45	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R46	1-218-676-11	s	METAL, CHIP 220 0.50% 1/16W
R47	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R48	1-218-833-11	s	METAL, CHIP 270 0.50% 1/16W
R49	1-218-833-11	s	METAL, CHIP 270 0.50% 1/16W
R50	1-218-692-11	s	METAL, CHIP 1K 0.50% 1/16W
R51	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R52	1-218-688-11	s	METAL, CHIP 680 0.50% 1/16W
R53	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R54	1-218-710-11	s	METAL, CHIP 5.6K 0.50% 1/16W
R55	1-218-648-11	s	METAL, CHIP 15 0.50% 1/16W
R56	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R58	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R59	1-218-858-11	s	METAL, CHIP 3K 0.50% 1/16W
R60	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R61	1-218-856-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R63	1-211-977-11	s	METAL, CHIP 22 0.50% 1/16W
R64	1-218-648-11	s	METAL, CHIP 15 0.50% 1/16W
R65	1-218-856-11	s	METAL, CHIP 2.4K 0.50% 1/16W
R66	1-218-714-11	s	METAL, CHIP 8.2K 0.50% 1/16W
R67	1-218-851-11	s	METAL, CHIP 1.5K 0.50% 1/16W
R69	1-218-704-11	s	METAL, CHIP 3.3K 0.50% 1/16W
R70	1-218-706-11	s	METAL, CHIP 3.9K 0.50% 1/16W
R72	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R73	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R75	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R76	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R77	1-218-708-11	s	METAL, CHIP 4.7K 0.50% 1/16W
R78	1-218-668-11	s	METAL, CHIP 100 0.50% 1/16W
R80	1-218-720-11	s	METAL, CHIP 15K 0.50% 1/16W
R81	1-218-716-11	s	METAL, CHIP 10K 0.50% 1/16W
R82	1-218-688-11	s	METAL, CHIP 680 0.50% 1/16W
RV1	1-237-032-11	s	RES, ADJ METAL 500
T1	1-417-171-11	s	COIL, BALUNE
T2	1-417-171-11	s	COIL, BALUNE

SW-711 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-765-A	o	MOUNTED CIRCUIT BOARD, SW-711
CN121	1-695-440-21	s	CONNECTOR, PC BOARD 6P, MALE
CN122	1-691-741-21	o	CONNECTOR, PC BOARD 2P, MALE
L1	1-410-369-11	s	INDUCTOR CHIP 1uH
L2	1-410-369-11	s	INDUCTOR CHIP 1uH
S1	1-571-187-11	s	SWITCH, TACTIL (REFLOW TYPE)
S2	1-571-187-11	s	SWITCH, TACTIL (REFLOW TYPE)
S3	1-571-187-11	s	SWITCH, TACTIL (REFLOW TYPE)

TR-89 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8274-748-A	o	MOUNTED CIRCUIT BOARD, TR-89
1pc	3-686-355-01	o	PCB PANEL(TR)
1pc	3-724-753-01	o	RING
5pcs	3-729-061-01	s	SCREW (M2X4.5) (TYPE 1)
C1	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C2	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C3	1-135-160-21	s	TANTALUM 15uF 20% 16V
C4	1-163-038-00	s	CERAMIC 0.1uF 25V
C5	1-128-594-11	s	ELECT 1uF 20% 50V
C6	1-128-594-11	s	ELECT 1uF 20% 50V
C7	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C8	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C9	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C10	1-128-257-21	s	ELECT 33uF 20% 10V
C11	1-163-121-00	s	CERAMIC, CHIP 150PF 5% 50V
C13	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C14	1-163-038-00	s	CERAMIC 0.1uF 25V
C15	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C16	1-135-165-11	s	TANTALUM 33uF 20% 16V
C17	1-163-253-11	s	CERAMIC, CHIP 120PF 5% 50V
C18	1-163-038-00	s	CERAMIC 0.1uF 25V
C19	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C20	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C21	1-163-131-00	s	CERAMIC, CHIP 390PF 5% 50V
C22	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C25	1-163-038-00	s	CERAMIC 0.1uF 25V
C26	1-163-038-00	s	CERAMIC 0.1uF 25V
C27	1-135-160-21	s	TANTALUM 15uF 20% 16V
C28	1-163-038-00	s	CERAMIC 0.1uF 25V
C29	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C30	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C31	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C32	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C33	1-163-038-00	s	CERAMIC 0.1uF 25V
C34	1-135-177-21	s	TANTALUM, CHIP 1uF 10% 25V
C35	1-135-165-11	s	TANTALUM 33uF 20% 16V
C36	1-163-253-11	s	CERAMIC, CHIP 120PF 5% 50V
C37	1-163-038-00	s	CERAMIC 0.1uF 25V
C38	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C39	1-163-111-00	s	CERAMIC, CHIP 56PF 5% 50V
C40	1-163-131-00	s	CERAMIC, CHIP 390PF 5% 50V
C41	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C44	1-163-038-00	s	CERAMIC 0.1uF 25V
C45	1-163-038-00	s	CERAMIC 0.1uF 25V
C46	1-135-160-21	s	TANTALUM 15uF 20% 16V
C47	1-163-038-00	s	CERAMIC 0.1uF 25V
C48	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C49	1-163-038-00	s	CERAMIC 0.1uF 25V
C50	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C51	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C52	1-163-038-00	s	CERAMIC 0.1uF 25V
C53	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C54	1-163-038-00	s	CERAMIC 0.1uF 25V
C55	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C56	1-163-095-00	s	CERAMIC, CHIP 12PF 5% 50V
C57	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C58	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C59-67	1-163-038-00	s	CERAMIC 0.1uF 25V
C68	1-135-165-11	s	TANTALUM 33uF 20% 16V

(TR-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C69	1-163-038-00	s	CERAMIC 0.1uF 25V
C70	1-163-038-00	s	CERAMIC 0.1uF 25V
C74	1-163-038-00	s	CERAMIC 0.1uF 25V
C75	1-163-038-00	s	CERAMIC 0.1uF 25V
C76	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C78	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C79	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C80	1-163-135-00	s	CERAMIC, CHIP 560PF 5% 50V
C81	1-163-127-00	s	CERAMIC, CHIP 270PF 5% 50V
C82	1-128-594-11	s	ELECT 1uF 20% 50V
C83	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C84	1-135-159-21	s	TANTALUM, CHIP 10uF 10% 20V
C85	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C86	1-135-165-11	s	TANTALUM 33uF 20% 16V
C87	1-163-038-00	s	CERAMIC 0.1uF 25V
C91	1-135-165-11	s	TANTALUM 33uF 20% 16V
C92	1-163-038-00	s	CERAMIC 0.1uF 25V
C93	1-163-038-00	s	CERAMIC 0.1uF 25V
C94	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C96	1-163-106-00	s	CERAMIC, CHIP 36PF 5% 50V
C97	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C98	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C99	1-163-135-00	s	CERAMIC, CHIP 560PF 5% 50V
C100	1-163-127-00	s	CERAMIC, CHIP 270PF 5% 50V
C101	1-128-594-11	s	ELECT 1uF 20% 50V
C102	1-135-165-11	s	TANTALUM 33uF 20% 16V
C103	1-163-038-00	s	CERAMIC 0.1uF 25V
C104	1-135-165-11	s	TANTALUM 33uF 20% 16V
C108	1-163-038-00	s	CERAMIC 0.1uF 25V
C109	1-163-038-00	s	CERAMIC 0.1uF 25V
C110	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C112	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C113	1-163-367-11	s	CERAMIC, CHIP 39PF 5% 50V
C114	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C115	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C116	1-163-038-00	s	CERAMIC 0.1uF 25V
C117	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C118	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C119	1-163-145-00	s	CERAMIC, CHIP 0.0015uF 5% 50V
C120	1-163-257-11	s	CERAMIC, CHIP 180PF 5% 50V
C121	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C122	1-128-594-11	s	ELECT 1uF 20% 50V
C123	1-163-038-00	s	CERAMIC 0.1uF 25V
C124	1-135-160-21	s	TANTALUM 15uF 20% 16V
C125	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C126	1-135-165-11	s	TANTALUM 33uF 20% 16V
C127	1-163-038-00	s	CERAMIC 0.1uF 25V
C128	1-135-165-11	s	TANTALUM 33uF 20% 16V
C132	1-163-038-00	s	CERAMIC 0.1uF 25V
C133	1-163-038-00	s	CERAMIC 0.1uF 25V
C134	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C136	1-163-111-00	s	CERAMIC, CHIP 56PF 5% 50V
C137	1-163-367-11	s	CERAMIC, CHIP 39PF 5% 50V
C138	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C139	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C140	1-163-038-00	s	CERAMIC 0.1uF 25V
C141	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C142	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C143	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C148	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C149	1-163-038-00	s	CERAMIC 0.1uF 25V
C150	1-135-159-21	s	TANTALUM, CHIP 10uF 10% 20V
C151	1-135-164-21	s	TANTALUM, CHIP 22uF 10% 16V
C152	1-163-038-00	s	CERAMIC 0.1uF 25V
C153	1-163-038-00	s	CERAMIC 0.1uF 25V
C154	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C155	1-163-038-00	s	CERAMIC 0.1uF 25V
C156	1-163-038-00	s	CERAMIC 0.1uF 25V
C157	1-163-038-00	s	CERAMIC 0.1uF 25V
C158	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C159	1-135-165-11	s	TANTALUM 33uF 20% 16V
C160	1-163-038-00	s	CERAMIC 0.1uF 25V
C161	1-128-594-11	s	ELECT 1uF 20% 50V
C162	1-128-594-11	s	ELECT 1uF 20% 50V
C163	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C164	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C165	1-163-038-00	s	CERAMIC 0.1uF 25V
C166	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C167	1-128-397-21	s	ELECT 100uF 20% 16V
C168	1-128-594-11	s	ELECT 1uF 20% 50V
C169	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C170	1-128-397-21	s	ELECT 100uF 20% 16V
C171	1-163-369-11	s	CERAMIC, CHIP 47PF 5% 50V
C172	1-163-038-00	s	CERAMIC 0.1uF 25V
C173	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C174	1-163-038-00	s	CERAMIC 0.1uF 25V
C175	1-128-594-11	s	ELECT 1uF 20% 50V
C176	1-163-038-00	s	CERAMIC 0.1uF 25V
C177	1-163-038-00	s	CERAMIC 0.1uF 25V
C178	1-163-101-00	s	CERAMIC, CHIP 22PF 5% 50V
C179	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C180	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C181	1-163-038-00	s	CERAMIC 0.1uF 25V
C182	1-163-101-00	s	CERAMIC, CHIP 22PF 5% 50V
C183	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C184	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C185	1-163-038-00	s	CERAMIC 0.1uF 25V
C187	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C189	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C190	1-128-594-11	s	ELECT 1uF 20% 50V
C191	1-128-594-11	s	ELECT 1uF 20% 50V
C192	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C193	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C194	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C195	1-163-038-00	s	CERAMIC 0.1uF 25V
C196	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V
C197	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C198	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C199	1-135-165-11	s	TANTALUM 33uF 20% 16V
C200	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C201-206	1-128-397-21	s	ELECT 100uF 20% 16V
C207	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C208	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C209	1-135-216-11	s	TANTALUM, CHIP 10uF 20% 10V
C210	1-135-210-11	s	TANTALUM, CHIP 4.7uF 20% 10V
C211	1-163-035-00	s	CERAMIC, CHIP 0.047uF 50V
C212	1-128-397-21	s	ELECT 100uF 20% 16V
C213	1-135-215-21	s	TANTALUM, CHIP 6.8uF 10% 16V

(TR-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C215	1-135-070-00	s	TANTALUM, CHIP 0.1uF 10% 35V
CF1	1-760-691-11	s	FILTER, CERAMIC
CF2	1-760-692-11	s	FILTER, CERAMIC
CF3	1-760-447-11	s	FILTER, CERAMIC
CF4	1-760-689-11	s	FILTER, CERAMIC
CF5	1-760-689-11	s	FILTER, CERAMIC
CF6	1-760-690-11	s	FILTER, CERAMIC
CF7	1-760-690-11	s	FILTER, CERAMIC
CF8	1-760-443-11	s	FILTER, CERAMIC
CF9	1-760-443-11	s	FILTER, CERAMIC
CF10	1-760-444-11	s	FILTER, CERAMIC
CF11	1-760-444-11	s	FILTER, CERAMIC
CN1	1-695-453-11	s	CONNECTOR, BOARD TO BOARD 50P
D1	8-719-800-76	s	DIODE 1SS226
D2	8-719-800-76	s	DIODE 1SS226
D3	8-719-041-39	s	DIODE KV1470
D4	8-719-800-76	s	DIODE 1SS226
D5	8-719-800-76	s	DIODE 1SS226
D6	8-719-800-76	s	DIODE 1SS226
D7	8-719-041-39	s	DIODE KV1470
D8	8-719-800-76	s	DIODE 1SS226
D9	8-719-104-34	s	DIODE 1S2835
D10	8-719-104-34	s	DIODE 1S2835
D11	8-719-800-76	s	DIODE 1SS226
D12	8-719-801-78	s	DIODE 1SS184
D13	8-719-800-76	s	DIODE 1SS226
D14	8-719-801-78	s	DIODE 1SS184
D15	8-719-104-34	s	DIODE 1S2835
D16	8-719-021-31	s	DIODE UZM5.1B
D17	8-719-801-78	s	DIODE 1SS184
D18	8-719-800-76	s	DIODE 1SS226
D19	8-719-104-34	s	DIODE 1S2835
D20-25	8-719-800-76	s	DIODE 1SS226
D25	8-719-104-34	s	DIODE 1S2835
D26	8-719-104-34	s	DIODE 1S2835
D27	8-719-021-31	s	DIODE UZM5.1B
FL1	1-236-273-11	s	FILTER, LOW PASS
IC1	8-759-700-09	s	IC NJM2043M-D
IC2	8-759-700-84	s	IC NJM2041M-D
IC3	8-759-209-15	s	IC TC4SU69F
IC4	8-759-271-14	s	IC TA8129Z
IC5	8-759-906-53	s	IC TL062CPS
IC6	8-759-271-14	s	IC TA8129Z
IC7	8-759-906-53	s	IC TL062CPS
IC8	8-759-271-14	s	IC TA8129Z
IC9	8-759-906-53	s	IC TL062CPS
IC10	8-759-906-53	s	IC TL062CPS
IC11	8-759-271-14	s	IC TA8129Z
IC13	8-759-009-10	s	IC MC14069UBF
IC14	8-759-009-82	s	IC MC14011BF-T2
IC15	8-759-009-82	s	IC MC14011BF-T2
IC16	8-759-711-58	s	IC NJM78L05UA
IC18	8-759-234-77	s	IC TC4S66F
IC19	8-759-300-71	s	IC HD14053BFP
IC20	8-759-983-69	s	IC LM358PS
IC21	8-759-300-71	s	IC HD14053BFP

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Ref. No. or Q'ty	Part No.	SP	Description
IC22	8-759-605-46	s	IC M51131L
IC23	8-759-701-24	s	IC NJM3414M
IC24	8-759-906-53	s	IC TL062CPS
IC25	8-759-701-24	s	IC NJM3414M
IC26	8-759-928-09	s	IC TLC27M2CPS
IC27	8-759-906-53	s	IC TL062CPS
IC28	8-759-700-50	s	IC NJM386M
IC29	8-759-082-61	s	IC TC4W53FU
L1-10	1-410-385-11	s	INDUCTOR, CHIP 22uH
L13	1-410-385-11	s	INDUCTOR, CHIP 22uH
L16	1-410-385-11	s	INDUCTOR, CHIP 22uH
L18	1-410-385-11	s	INDUCTOR, CHIP 22uH
L20	1-410-385-11	s	INDUCTOR, CHIP 22uH
L21	1-410-385-11	s	INDUCTOR, CHIP 22uH
L22	1-410-385-11	s	INDUCTOR, CHIP 22uH
L23	1-410-393-11	s	INDUCTOR, CHIP 100uH
L24	1-410-393-11	s	INDUCTOR, CHIP 100uH
L25	1-410-393-11	s	INDUCTOR, CHIP 100uH
L26	1-410-385-11	s	INDUCTOR, CHIP 22uH
LV1	1-409-826-11	s	COIL, VAR 10uH
LV2	1-409-825-11	s	COIL, VAR 3uH
LV3	1-411-298-11	s	COIL, VAR 15uH
LV4	1-409-827-11	s	COIL, VAR 22uH
LV5	1-409-827-11	s	COIL, VAR 22uH
LV6	1-409-827-11	s	COIL, VAR 22uH
LV7	1-409-827-11	s	COIL, VAR 22uH
Q1	8-729-119-04	s	TRANSISTOR 2SC3115-D27
Q2	8-729-109-44	s	TRANSISTOR 2SK94
Q3	8-729-109-44	s	TRANSISTOR 2SK94
Q4	8-729-119-04	s	TRANSISTOR 2SC3115-D27
Q5	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q6	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q7	8-729-216-22	s	TRANSISTOR 2SA1162
Q8	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q9	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q11	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q12	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q13	8-729-216-22	s	TRANSISTOR 2SA1162
Q14	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q15	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q17	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q18	8-729-216-22	s	TRANSISTOR 2SA1162
Q19	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q20	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q21	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q22	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q23	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q24	8-729-122-63	s	TRANSISTOR 2SA1226
Q25	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q26	8-729-122-63	s	TRANSISTOR 2SA1226
Q27	8-729-200-87	s	TRANSISTOR 2SC2714-Y
Q28	8-729-122-63	s	TRANSISTOR 2SA1226
Q29	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q30	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q33	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q34	8-729-216-22	s	TRANSISTOR 2SA1162
Q38	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6

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Ref. No. or Q'ty	Part No.	SP	Description
Q42	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q43	8-729-216-22	s	TRANSISTOR 2SA1162
Q44	8-729-216-22	s	TRANSISTOR 2SA1162
Q48	8-729-216-22	s	TRANSISTOR 2SA1162
Q49	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q50	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q53	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q54	8-729-216-22	s	TRANSISTOR 2SA1162
Q55	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q56	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q57	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q58	8-729-141-48	s	TRANSISTOR 2SB624-BV345
Q60	8-729-216-22	s	TRANSISTOR 2SA1162
Q61	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q62	8-729-141-75	s	TRANSISTOR 2SD596DV345
R1	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R2	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R3	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R4	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R5	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R6	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R7	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R8	1-208-810-11	s	METAL, CHIP 15K 0.50% 1/10W
R9	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R10	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R11	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R12	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R13	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R14	1-208-810-11	s	METAL, CHIP 15K 0.50% 1/10W
R15	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R16	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R17	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R18	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R19	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R20	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R21	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R22	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R23	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R24	1-216-671-11	s	METAL, CHIP 6.8K 0.5% 1/10W
R25	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R26	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R28	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R29	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R30	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R31	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R32	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R33	1-208-810-11	s	METAL, CHIP 15K 0.50% 1/10W
R34	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R35	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R40	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R41	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R42	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R43	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R44	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R45	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R46	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R47	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R48	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R49	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R50	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R51	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R52	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R53	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R54	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R55	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R56	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R57	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R59	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R60	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R61	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R62	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R63	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R64	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R65	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R66	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R71	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R72	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R73	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R74	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R75	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R76	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R77	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R78	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R79	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R80	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R81	1-216-133-00	s	METAL, CHIP 3.3M 5% 1/10W
R82	1-218-764-11	s	METAL, CHIP 330K 0.5% 1/10W
R83	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R84	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R85	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R86	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R87	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R89	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R90	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R91	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R92	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R93	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R94	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R95	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R96	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R97	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R98	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R99	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R100	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R101	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R102	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R103	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R104	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R105	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R106	1-216-309-00	s	METAL, CHIP 5.6 5% 1/10W
R107	1-216-309-00	s	METAL, CHIP 5.6 5% 1/10W
R108	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R109	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R110	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R111	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R112	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R113	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R114	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R115	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R116	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R117	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R123	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R124	1-208-784-11	s	METAL, CHIP 1.2K 0.50% 1/10W
R125	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R126	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R127	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R128	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R129	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R130	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R131	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R132	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R133	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R134	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R135	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R136	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R137	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R138	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R139	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R140	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R141	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R142	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R143	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R152	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R153	1-208-784-11	s	METAL, CHIP 1.2K 0.50% 1/10W
R154	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R155	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R156	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R157	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R158	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R159	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R160	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R161	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R162	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R163	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R164	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R165	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R166	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R174	1-218-756-11	s	METAL, CHIP 150K 0.50% 1/10W
R175	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R176	1-208-784-11	s	METAL, CHIP 1.2K 0.50% 1/10W
R177	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R178	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R179	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R180	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R181	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R182	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R183	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R184	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R185	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R186	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R187	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R188	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R189	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R190	1-216-113-00	s	METAL, CHIP 470K 5% 1/10W
R191	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R192	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R193	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R194	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R196	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R197	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R198	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R199	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R200	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R201	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R210	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R211	1-208-784-11	s	METAL, CHIP 1.2K 0.50% 1/10W
R212	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R213	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R214	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R215	1-208-812-11	s	METAL, CHIP 18K 0.50% 1/10W
R216	1-216-677-11	s	METAL, CHIP 12K 0.5% 1/10W
R217	1-216-657-11	s	METAL, CHIP 1.8K 0.5% 1/10W
R218	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R219	1-216-688-11	s	METAL, CHIP 36K 0.5% 1/10W
R220	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R221	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R222	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R227	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R228	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R229	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R230	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R231	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R232	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R233-240	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R241	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R243	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R244	1-208-800-11	s	METAL, CHIP 5.6K 0.50% 1/10W
R245	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R246	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R248	1-216-627-11	s	METAL, CHIP 100 0.5% 1/10W
R249-253	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R254	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R255	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R256	1-216-295-91	s	RES, CHIP 0
R257	1-216-295-91	s	RES, CHIP 0
R258	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R259	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R260	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R261	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R262	1-216-295-91	s	RES, CHIP 0
R263	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R264	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R265	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R267	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R268	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R269	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R270	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R271	1-208-806-11	s	METAL, CHIP 10K 0.50% 1/10W
R272	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R273	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R274	1-218-760-11	s	METAL, CHIP 220K 0.5% 1/10W
R275	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R276	1-218-754-11	s	METAL, CHIP 120K 0.50% 1/10W
R277	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R278	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R279	1-208-824-11	s	METAL, CHIP 56K 0.50% 1/10W

(TR-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R280	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R281	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R282	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R283	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R284	1-218-754-11	s	METAL, CHIP 120K 0.50% 1/10W
R285	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R286	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R287	1-208-824-11	s	METAL, CHIP 56K 0.50% 1/10W
R288	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R289	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R290	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R291	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R292	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R293	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R294	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R295	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R297	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R298	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R299	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R300	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R301	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R302	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R303	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R304	1-216-611-11	s	METAL, CHIP 22 0.5% 1/10W
R305	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R306	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R307	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R308	1-216-659-11	s	METAL, CHIP 2.2K 0.5% 1/10W
R309	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R310	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R311	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R312	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R313	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R314	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R315	1-208-810-11	s	METAL, CHIP 15K 0.50% 1/10W
R316	1-216-684-11	s	METAL, CHIP 24K 0.50% 1/10W
R317	1-208-814-11	s	METAL, CHIP 22K 0.50% 1/10W
R318	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R319	1-208-774-11	s	METAL, CHIP 470 0.50% 1/10W
R320	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R321	1-208-800-11	s	METAL, CHIP 5.6K 0.50% 1/10W
R322	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R323	1-216-661-11	s	METAL, CHIP 2.7K 0.5% 1/10W
R324	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R325	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R326	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R327	1-216-603-11	s	METAL, CHIP 10 0.5% 1/10W
R331	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R332	1-208-822-11	s	METAL, CHIP 47K 0.50% 1/10W
R333	1-216-295-91	s	RES, CHIP 0
RV1	1-237-032-11	s	RES, ADJ METAL 500
RV2	1-237-036-11	s	RES, ADJ METAL 10K
RV3	1-237-036-11	s	RES, ADJ METAL 10K
RV4	1-237-034-11	s	RES, ADJ METAL 2K
RV5	1-237-036-11	s	RES, ADJ METAL 10K
RV6	1-237-034-11	s	RES, ADJ METAL 2K
RV7	1-237-034-11	s	RES, ADJ METAL 2K
RV8	1-237-037-11	s	RES, ADJ METAL 20K
RV9	1-237-037-11	s	RES, ADJ METAL 20K

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(TR-89 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
RV10	1-237-035-11	s	RES, ADJ METAL 5K
RV11	1-237-038-11	s	RES, ADJ METAL 50K
RV12	1-237-035-11	s	RES, ADJ METAL 5K
RV13	1-237-038-11	s	RES, ADJ METAL 50K
RV14	1-241-264-11	s	RES, ADJ, CERMET 10K
RV15	1-241-266-11	s	RES, ADJ, CERMET 50K
S1	1-692-531-11	s	SWITCH, TOGGLE
S2	1-570-711-11	s	SWITCH, SLIDE
S3	1-692-270-21	s	SWITCH, SLIDE
S4	1-692-270-21	s	SWITCH, SLIDE
S5	1-570-711-11	s	SWITCH, SLIDE
S6	1-570-710-11	s	SWITCH, SLIDE
X1	1-760-260-21	o	CRYSTAL 32.768KHz

VR-191 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-652-746-11	o	PRINTED CIRCUIT BOARD, VR-191
CN131	1-695-440-21	s	CONNECTOR, PC BOARD 6P, MALE
RV1	1-238-293-11	s	RES, VAR CARBON 10K
RV2	1-238-293-11	s	RES, VAR CARBON 10K
S1	1-570-985-11	s	SWITCH, TOGGLE

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-426-476-12	s	FILTER, MPX
			HARNESS (40P-1)
			(CN8/MB-590 board to CN143/CN-1154 board)
CN8	1-565-133-11	o	HOUSING, 14P
14pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN143	1-565-133-11	o	HOUSING, 14P
14pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
			HARNESS (40P-2)
			(CN9/MB-590 board to CN144/CN-1154 board)
CN9	1-565-132-11	o	HOUSING, 13P
11pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN144	1-565-132-11	o	HOUSING, 13P
11pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
			HARNESS (40P-3)
			(CN18/MB-590 board to CN145/CN-1154 board)
CN18	1-565-130-11	o	HOUSING, 11P
8pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN145	1-565-130-11	o	HOUSING, 11P
8pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
			HARNESS (70-71)
			(CN4/DC-70 board to CN2/DC-71 board)
CN4	1-580-578-11	s	HOUSING, 4P
4pcs	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
CN2	1-580-578-11	s	HOUSING, 4P
4pcs	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
			HARNESS (BATT CN)
			(CN22/MB-590 board to CN107/TO CAMERA)
CN22	1-580-579-11	o	HOUSING, 6P
4pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
CN107	1-766-967-21	o	CONNECTOR, BATTERY
			HARNESS (DC)
			(CN14/MB-590 board to CN1/DC-71 board)
CN14	1-580-585-11	o	HOUSING, 18P
15pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
3pcs	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
CN1	1-580-585-11	o	HOUSING, 18P
15pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
3pcs	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
			HARNESS (EARPHONE)
			(CN122/SW-711 board to CN106/EARPHONE connector)
CN122	1-565-121-11	o	HOUSING, 2P
2pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN106	1-507-251-XX	s	JACK
			HARNESS (INCOM)
			(CN12/MB-590 board to CN103/INCOM/PGM connector)
1pc	1-954-677-12	s	HARNESS (INCOM)
CN12	1-565-129-11	o	HOUSING, 10P
7pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN103	1-563-159-11	s	CONNECTOR, 5P, FEMALE
5pcs	1-414-142-11	s	MICRO INDUCTOR 1.00uH
1pc	1-500-082-11	s	CLAMP, SLEEVE FERRITE
			HARNESS (POWER)
			(CN1/DC-70 board to CN112/FL-177 board)
CN1	1-562-352-11	o	HOUSING, 2P
2pcs	1-562-210-11	o	CONTACT, FEMALE AWG18-22
CN112	1-562-352-11	o	HOUSING, 2P
2pcs	1-562-210-11	o	CONTACT, FEMALE AWG18-22

(FRAME)

Ref. No. or Q'ty	Part No.	SP	Description
			HARNESS (POWER SW)
			(CN19/MB-590 board to CB1 and POWER switch)
CN19	1-580-579-11	o	HOUSING, 6P
4pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
2pcs	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
CB1 !	1-533-628-11	s	BREAKER, CIRCUIT
S1	1-571-367-11	s	SWITCH, TOGGLE
			HARNESS (RET)
			(CN11/MB-590 board to CN104/RET CONT connector and
			CN105/RET OUT connector)
CN11	1-565-127-11	o	HOUSING, 8P
8pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN105	1-561-781-11	s	CONNECTOR, BNC, FEMALE
CN104	1-562-222-41	s	CONNECTOR, 6P, FEMALE
			HARNESS (RF)
			(CN3/FL-177 board to MPX FILTER)
1pc	1-954-674-11	o	HARNESS (RF)
1pc	1-560-163-00	s	PLUG, RF
CN3	1-566-317-11	s	PLUG, RF
			HARNESS (RX)
			(CN21/MB-590 board to CN2/RX-25 board)
CN21	1-565-129-11	o	HOUSING, 10P
10pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN2	1-565-129-11	o	HOUSING, 10P
10pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
			HARNESS (SW)
			(CN13,CN15/MB-590 board to CN121/SW-711 board)
CN13	1-565-121-11	o	HOUSING, 2P
2pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN15	1-565-123-11	o	HOUSING, 4P
4pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN121	1-565-125-11	o	HOUSING, 6P
6pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
			HARNESS (TRIAX)
			(CN111/FL-177 board to CN101/TO CCU)
1pc	1-954-673-11	o	HARNESS (TRIAX(UC)) [for UC]
	1-954-671-12	o	HARNESS (TRIAX(J)) [for J]
	1-954-672-11	o	HARNESS (TRIAX(EK)) [for CER]
CN101	1-565-801-11	s	CONNECTOR, DOUBLE COAXIAL [for UC]
	1-565-797-12	s	CONNECTOR, DOUBLE COAXIAL [for J]
	1-561-844-11	s	CONNECTOR, COAXIAL (FEMALE) [for CER]
1pc	2-132-244-01	o	SPACER [for UC]
			HARNESS (UNREG)
			(CN23/MB-590 board to CN3/DC-70 board and
			CN102/DC IN connector)
CN23	1-580-581-11	o	HOUSING, 10P
9pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
CN3	1-580-583-11	o	HOUSING, 14P
7pcs	1-573-176-11	o	CONTACT, LY, FEMALE AWG22-26
1pc	1-580-599-11	o	CONTACT, LY, FEMALE AWG26-30
CN102	1-565-908-11	s	CONNECTOR, 4P, MALE
			HARNESS (VR)
			(CN10/MB-590 board to CN131/VR-191 board)
CN10	1-565-125-11	o	HOUSING, 6P
6pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28
CN131	1-565-125-11	o	HOUSING, 6P
6pcs	1-565-163-11	o	CONTACT, FEMALE AWG32-28

6-4. Accessories List

Ref. No. or Q'ty	Part No.	SP	Description
1	3-188-446-01	o	COVER, RAIN [for J]
1	3-717-823-01	s	COVER, BNC
1	3-734-214-02	s	CLAMP, CABLE

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